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MINISTRY OF EDUCATION

BUREAU OF EDUCATION (INDIA)

PAMPHLET—53

FACILITIES FOR TECHNICAL EDUCATION IN INDIA

Preliminary Report on the Survey of Technical Institutions in India conducted by the All India Council for Technical Education

PART IV

सत्य मेव जयते

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PART IV

In part I and II of the report, have been outlined the existing facilities forTechnical Education and brief details about each of the Institutions In Part III, for ease in studying the comparative merits of the institutions Tabular statements on the existing facilities, cost of education, working weeks etc. are furnished.

In this part the salient features of the development plan of each Institution have been summarised.

RSITY
SRINAGAR

N-1

COLLEGE OF TECHNOLOGY, BENARES HINDU UNIVERSITY.

Proposed Development Plan

1. Started in 1939 incorporating in it the Department of Industrial Chemistry established in 1921.
2. *Affiliated to/Recognised by*—Benares Hindu University.
3. *No. of students applying for admission*—1200* including 517 for the Department of Glass, Ceramics, and Pharmaceutics.
4. *No. of students actually admitted*—53* in the Department of Glass, Ceramics, and Pharmaceutics.

(* Data for Industrial Chemistry Department not available)

5. *Proposed Plan for Development :—*

(*a*) *Objective :—*

Improvement in the efficiency of teaching in general, introduction of research in the Glass Technology Department and a Pharmaceutical Workshop and Operative Pharmaceutical Laboratory for the Pharmaceutics Department, as recommended by the Sir Joseph Bhore Committee, for enabling post-graduate work to be done.

(*b*) *Expenditure Involved :—*

(*i*) *Glass Technology Department.*

	Total cost involved lakhs of Rs.	
Furnaces and Apparatus	·51	
Glass Making Machineries (Bottles, Tumblers, Dishes etc.)	·50	
Physical Testing and Research Laboratories	·20	
TOTAL	1·21	1·21

(*ii*) *Pharmaceutics Department*

Buildings and Equipment for the operative Pharmaceutical Laboratory.	·40	
Machineries for Phar. Workshop	·28	
TOTAL	·68	0·68

(*iii*) *General for the college of Technology Buildings.*

	Approx. Effective Floor Area in 1000 sq. ft.	Cost in lakhs of Rs.	
Instructional	4·5	0·45	
Residential*	20·0	2·00	
TOTAL	..	2·45	2·45**
Grand total			4·34

*Besides 30 teaching staff quarters and 40 ministerial staff quarters, for which no space requirement is specified, are also required.

** Estimated.

N-2

BENARES HINDU UNIVERSITY, DEPARTMENT OF GEOLOGY

Proposed Development Plan

(1) *Started in* :— 1922

(2) *Affiliatd to/Recognised by*—Benares Hindu University.

(3) *Number of students applying for admission*— 150

(4) *Number actually admitted* — 78—B.Sc. } 15—M.Sc. } 2—Ph.D.

(5) *Proposed Plan for Development*—

Information not available.

(N-3)

HARCOURT BUTLER TECHNOLOGICAL INSTITUTE, CAWNPORE

Proposed Development Plan

(1) *Started in*—1920, Leather Technology Section started in 1922 and Sugar Technology in 1926. The former was abolished in 1933 and the latter developed into a separate Institute known as the Imperial Institute of Sugar Technology in 1936.

(2) *Affiliated to/Recognised by*:—U.P. Government.

(3) *Number of students applying for admission*—

General Research	17
Oil Technology	197

(4) *Number actually admitted*—

General Research	7
Oil Technology	52

(5) *Proposed Plan for Development*—

(*a*) *Objective* :—

A five-year extension scheme is under consideration, which envisage adequate provision for

(i) A complete experimental oil mill, soap factory, a refinery for the oil section.

(ii) Introduction of studies in Chemical Engineering, Heavy Chemicals, Fine Chemicals covering Foods, Drugs and Pharmaceuticals, and Fermentation Technology in the General Chemical Technology and Research Sections.

(iii) Introduction of Mechanical and Electrical Engineering Courses

(iv) Additional Teaching, Research and Administrative Staff.

(v) Construction of new hostel for 100 students.

(vi) Development of the existing library.

(*b*) *Additional Expenditure Involved* :—

Capital

(*i*) Additional buildings :

	Approx. effective floor area in 1000 sq. ft.	Cost in Lakhs of Rupees.
Instructional	Estimates under consideration.	
Residential (student hostel)	Information not available.	1·5
ii) Additional buildings and Equipment :		
(1) For Oil Mill, Soap Factory and Refinery	..	5·0
(2) For Chemical Engg., Heavy Chemicals, Fine Chemicals and Fermentation Technology	..	6·5
(3) For Mechanical and Electrical Engineering	..	5·0
TOTAL	..	18·0

	1st Yr. (Lakhs of Rs.)	2nd Yr. (Lakhs of Rs.)	3rd Yr. (Lakhs of Rs.)	4th Yr. (Lakhs of Rs.)	5th Yr. (Lakhs of Rs.)	
(*iii*) Library	·30	·15	·10	·10	·10	·75
GRAND TOTAL						18·75

Recurring :

(*i*) Additional Staff :—(1) Teaching, Research and Administrative Staff—Number not specified. Details under consideration.

(2) One Librarian and Two Peons.

	Financial Implications in Lakhs of Rupees
(*ii*) Additional Staff Salaries and other contingencies :—	
(1) For Oil Mill, Soap Factory, Refinery	·40
(2) For Chemical Engineering, Heavy Chemicals, Fine Chemicals and Fermentation Technology	·90
(3) For Mechanical and Electrical Engineering	·80
TOTAL .	2·10

(N-4)

INDIAN INSTITUTE OF SUGAR TECHNOLOGY, CAWNPORE

Proposed Development Plan

1. *Started in* :—1st October 1936.

2. *Affiliated to/Recognised by* :—Government of India.

3. *Number of students applying for admission* :

   (*a*) Associateship course in Sugar Technology :
   No. of applicants always more than the No. of Seats.

   (*b*) Other courses : No. of applicants—sometimes more and sometimes less than the No. of seats.

4. *Number actually admitted* : 105 in 1946 in 12 different courses. Maximum in any course 12.

5. *Proposed Plan for Development* :—

   (*a*) *Objective* :

   Development plan is under the consideration of the Indian Central Sugarcane Committee. The plan involves the question of rehousing the Institute in its own buildings comprising of instructional units, residences and hostels.

   (*b*) Additional Expenditure involved :— No information available.

(N-5)

COLLEGE OF ENGINEERING AND TECHNOLOGY, MUSLIM UNIVERSITY ALIGARH

Proposed Development Plan

1. *Started in* :—1935. Graduate courses in Electrical and Mechnical Engineering, and in Civil Engineering instituted in 1940 and 1942 respectively.
2. *Affiliated to/Recognised by* :—Muslim University, Aligarh.
3. *No. of students applying for admission* :— 730 in 1946.
4. *No. of students actually admitted* :— 168 for Degree courses, 79 for Diploma courses. Total 247.

5. Proposed Development Plan:—

(*a*) *Objective*:—

(i) The number of students, which was 188 in 1944, increased to 554 in 1946. It is proposed to increase the capacity to 720 from 1947.

(ii) Existing College Buildings being unsuitable and existing effective teaching space being inadequate, it is proposed:—

(1) Immediately to provide extensions of the existing buildings at a cost of Rs. 2·90 lakhs in 1947-48.

(2) To construct a new Main Building for the College at a cost of Rs. 13·85 lakhs as part of the 5-year plan for development from 1947-1951.

(iii) To introduce Honours Course in Engineering and Departments of Communication Engineering and Aeronautics soon, as well as Courses in Agricultural Engineering in 1948-49, Chemical Engineering (1949-50) and Metallurgical Engineering (1949-50), all as part of the 5-year Development Plan.

(iv) Teaching Staff to be increased from 37 to 50 for the three existing Departments and Aeronautics.

(v) Provision of adequate equipment and residential quarters for students and staff.

(vi) Improvement of Salary Grades of Teaching and other staff.

(*b*) Additional Expenditure involved :—

Capital	1947-48		1947-51		Total cost Rs. (Lakhs
	Effective Floor area in 1000 sq. ft.	Cost in Rupees (Lakhs.)			
	(1)	(2)	(1)	(2)	
(i) Additional Buildings : Instructional with Fittings and Furniture	28	2·90	107·6	13·85	16·75(1)

(N-5)—contd.

Capital	1947-48		1947-51		Total cost Rs. (Lakhs)
	Effective Floor area in 1000 sq. ft.	Cost in Rupees (Lakhs)			
(*i*) Additional Buildings—*contd.*					
Residential—					
Staff-quarters	18·14	1·814	72·56	7·256	9·07 (2)
Hostel	—	—	..	..	17·00 (3)
(*ii*) Student Amenities	..	..	..	..	1·00

	1947-48	1948-49	1949-50	
	Rs. (Lakhs)	Rs, (Lakhs)	Rs. (Lakhs)	
(*iii*) Equipment	3·00	3·00	2·00	8·00 (4)
(*iv*) Library—				
Furniture and Fittings	0·50	..	..	..
Books	0·25	0·25	0·25	..
Total Capital Expenditure involved				53·07 (5)

NOTES :—

(1) This Item is shown as costing Rs. 19·75 Lakhs, *i.e.*, an increase of Rs. 3 Lakhs, in "Reply to the Questionnaire".

(2) This item is shown as costing Rs. 15·00 Lakhs, *i.e.*, an increaase of Rs. 5·93 Lakhs in " Reply to the Questionnaire ".

(3) This item is said to have been provided in the Memorandum for non-recurring expenditure of the University.

(4) This item is shown as costing Rs. 40·00 Lakhs, *i. e.*, an increase of Rs. 32·00 Lakhs in " Reply to the Questionnaire ". Details of allocation of Rs. 40·00 Lakhs is shown under Additional Informations (1) below.

(5) Total Capital Expenditure involved amounts to Rs. 92·75 Lakhs *i.e.*, an increase of Rs. 39·68 Lakhs, in "Reply to the Questionnaire ".

Recurring :

	1946-47	1947-48	1948-49	1949-50
	Rs. (Lakhs)	Rs. (Lakhs)	Rs. (Lakhs)	Rs. (Lakhs)
(*i*) Additional Expenditure due to proposed improvement in salary-grades of staff.	0·942*	..	..	..
(*ii*) Salary incl. D.A. & P.F. of Additional Staff required (14 teaching & 14 other staff inclusive)	..	0·994	1·07	1·14
(*iii*) Additional Expenditure, due to salary of existing staff on proposed grades, over 1946-47 salary on existing grades as base (38 Teaching and 85 other staff inclusive).	..	1·121	1·30	1·48
(*iv*) Other expenses and contingencies		Not stated		
Total Additional Annual Recurring Expenditure	..	2·115	2·37	2·62

*** Budgeted for 1946-47 on existing grades : Rs. 1·632 Lakhs.**

Income from student fees with 550 students : Rs. 1·40 Lakhs approx., with 720 students Rs. 1·80 lakhs approx.

Additional informations :

(I) Allocation of Rs. 40·00 Lakhs for Equipments :—

(1)	Electric Laboratory	Rs. 5 Lakhs
(2)	Communication Laboratory	Rs. 5 Lakhs
(3)	Hydraulics & Strength of Materials Laboratory	Rs. 3 Lakhs
(4)	Aeronautics Laboratory	Rs. 5 Lakhs
(5)	Mechanical Workshop	Rs. 6 Lakhs
(6)	Electrical Workshop	Rs. 3 Lakhs
(7)	Survey and Drawing Instruments	Rs. 2 Lakhs
(8)	Heat Engines Laboratory	Rs. 2 Lakhs
(9)	Equipment for Research Laboratory	Rs. 5 Lakhs
(10)	Models	Rs. 2 Lakhs
(11)	Furniture	Rs. 2 Lakhs
	TOTAL	Rs. 40 Lakhs

(II) Value of existing Laboratory & Workshop Equipment—Rs. 2·75 Lakhs.

(III) Existing and Proposed Salary Grades :—

	Designation of Staff	*Existing Grade* Rs.	*Proposed Grade* Rs.
1	Principal	1,500	1,750
2	Professors	1,100 500—800	1,250—50—1,750
3	Readers	300—20—550	600—40—1,000
4	Lecturers I	200—10—350	300—30—600
5	Lecturers II	125—10—200	250—20—450
6	Demonstrators	100	150—15—250

(IV) (a) No. of existing and additional Teaching Staff :—

Department	Professor		Reader		Lecturer I		Lecturer II		Demonstrator		Total
	Exis.	Add.	Exis.	Add.	Exis.	Add.	Exis.	Add.	Exis.	Add.	
Civil Engineering	1	..	1	1	1	1	4	1	2	1	
Electrical Engineering	1*	..	1	1	3	1	2	1	4	1	
Electrical Engineering	1	..	1	..	1	1	5	1	2	1	
Mech. Engg.	..	..	1	..	..	..	..	..	..		
Aeronautics, Mathematics and Science	..	..	..	..	..	..	3	..	1	..	
Drawing	..	..	..	..	..	..	..	..	1	..	
Workshop Superintendent	..	..	..	..	..	..	..	..	..	..	
Draftsman	..	..	..	..	1	..	..	..		..	
Supdt. of Aeronautics Workshop	..	..	..	..	..	1	..	..	..	..	
Foreman of Aeroshop	..	..	..	..	..	..	..	1	..	..	
TOTAL TEACHING STAFF	3	..	4	2	6	5	14	4	11	3	

Existing . . . . 3+4+6+14+11=38
Additional . . . . 2+5+4+ 3 =14 (1 Draftsman, 1 Supdt., 1 Foreman included)

(N-5)—contd.

(IV) (b) No. of Existing and Additional Other Staff :—

Existing	85
Additional	14

(V) Proposed Additional Courses of :—

Proposed year of starting	Course of study	No. of students	No. of Teachers required	No. of Other Staff Required	Capital Expendt. Rs. (Lakhs)	Recurring Staff Salary Rs.	Expendt. Other Expenses Rs.
1947-48 . .	Aeronautical Engg.	50	12	25	1·00	70,000	20,000
1948-49 . .	Agricultural Engg.	50	9	25	1·00	53,000	20,000
1949-50 . .	Chemical Engg.	..	6	10	1·00	35,000	30,000
	Metallurgical Engg.	..	4	..	2·00	30,000	20,000
	..	..	..	..	..	1,88,000	90,000

(*a*) Total Additional Capital Expenditure involved : Rs. 5·00 Lakhs.

(*b*) Total Additional Recurring Expenditure involved : Rs.2·78 Lakhs

COLLEGE OF MINING AND METALLURGY BENARES HINDU UNIVERSITY

Proposed Development Plan

1. *Started in* :—1923, as a Department. Raised to the Status of a College in 1944.
2. *Affiliated to/Recognised by* :—Benares Hindu University.
3. *Number of students applying for admission* :—645 in 1946.
4. *Numcer of students actually admitted* :—42 in 1946.
5. *Proposed Plan of Development* :—

(*a*) *Objective* :—

The total number of students in the College has increased from 12 in 1923 to 184 in 1946. It is desired to increase the number of admissions by 50 per cent. It is further contemplated to introduce a Degree course in Fuel Technology. The existing courses will be reorganised so that there will be a common curriculum for Mining, Metallurgy and Fuel Technology in the first year only. It is also proposed to depute one member of the staff every year to study metallurgical practice abroad in more industrialised countries.

(*b*) *Additional Expenditure involved* —

Capital	1946-47	1947-48	1948-49	1949-50	1949-50	1950-51
			(Cost in Lakhs of rupees)			
(*i*) Buildings :—						
Instructional . .		..	..	..	..	..
	0·44	0·50	0·50	0·40	0·50	0·250
(*ii*) Equipment .	1·40	1·36	1·33	0·875		2·50

Total cost. 1946-51, in Lakhs of Rs. 9·653 + 5 lakhs (for a shed to house rolling mills, foundry, furnaces etc.)

Recurring :—

(*i*) Additional Staff—17 in number.

			(In lakhs of Rupees)		
(*ii*) Additional Staff salary (on C.A.B. scale of pay) . .	**0·86**	**1·27**	**1·33**	**1·39**	**1·45**
(*iia*) For staff member studies abroad	**0·10**	**0·10**	**0·10**	**0·10**	**0·10**
(*iii*) Other Contingencies . .	**0·20**	**0·25**	**0·30**	**0·35**	**0·40**
Total recurring cost in lakhs of Rs. .	**1·16**	**1·62**	**1·73**	**1·84**	**1·95**

DELHI POLYTECHNIC, GOVERNMENT OF INDIA, DELHI

Proposed Development Plan

1. *Started in* : 1941.

2. *Affiliated to/Recognised by:*—Government of India Institution. The Department of Education is the final administrative authority.

3. *Number of students applying for admission* —583 in **1946.**

4. *Number actually admitted* —219 in 1946.

5. *Proposed plan for Development*—

(*a*) *Objective* :—

(i) It is proposed to provide for Degree Courses in Engineering (Electrical, Mechanical and Civil), Chemical Engineering and Technology and Commerce, full professional courses in Art and Architecture and in Textile Technology in addition to existing courses.

(ii) It is also proposed that :—

The Senior Departments of the Institution will be moved to a new site in the vicinity of the Delhi University where accommodation will be provided for *1162 day students* and *1100 evening students.*

The Technical High School (which will remain at the present site) will have its number of students increased from *424* to *600.*

(*b*) *Additional Expenditure involved* :

Capital	Approximate Floor Area	Effective area in (1000 sq. ft.)	Estimated cost in lakhs of Rs.
***(i) New Buildings :**			
Instructional	..	266·5	26·65
Residential (students, Hostel for 500)	..	143·6	14·36
,, (staff)	..	161·5	16·15
			5,7·16

	1947-48	1948-49	1949-50	Total
***(ii) Additional Equipment (Lab. and Workshop for all the Senior Deptts.)**	7·90	7·73	6·62	22·25
(iii) Other cotingencies:				
Books (for all Senior Deptts.)	·20	·22	·24	·66
Furniture and Fittings (for all Senior Deptts.)	·20	3·00	2·61	5·81
Total Additional Cost	..	..	.	85·88

***Details shown as per list attached.**

(N-7)—contd.

Recurring—*contd.*

	Financial Implications in lakhs of Rs.
*(*i*) Additional Staff : 168 in number.	
*(*ii*) Additional Staff Salary. (Financial Implications *not supplied* by the Institution Computed on *minimum* of existing respective grades) .	2·36
Total Additional Recurring Expenditure	2·36

*(Details shown as per lists attached).

(*b*) (*i*) (Capital Expenditure)

DELHI POLYTECHNIC

Summary of new accommodation

Buildings	Items	Approximate effective Floor Area in (1000 sq. ft.)	Estimated cost in lakhs of Rupees
INSTRUCTIONAL (Buildings)	I. Administrative Offices	12·667	
	II. Recreation Block	16·734	
	III. Library	8·333	
	IV. Exhibition Hall	13·333	
	V. Central Stores	8·667	
	VI. Service Blocks	6·868	
	VII. Class Rooms	16·560	
	VIII. Drawing Offices and Studios . . .	26·867	
	IX. Departmental Offices	16·400	
	X. Junior Laboratories	8·667	
	XI. Senior Laboratories	33·867	
	XII. Instructors' Rooms	5·200	
	XIII. Workshops	82·333	
	XIV. Advanced work and Research . . .	10·000	
	Total (Instructional)	266·496	26·65
BUILDINGS			
Residential (Students)	Hostel Accommodation for 500 students . .	143·6	14·36
Residential (Staff)	Accommodation for staff	161·5	16·1
	Total (Residential)	305·1	30·51
	GRAND TOTAL	571·596	57·16

(*b*) (*ii*) and (*iii*) (Capital Expend.) Summary of Equipment required during 1947-50.

	Departments	Estimated cost in lacs of Rs.			
		1947-48	1948-49	1949-50	Total
I—EQUIPMENT I. Laboratory and Workshop Equipment (Senior Department)	1. Commerce	·10	·05	·03	·18
	2. Artichitecture	·05	·05	..	·10
	3. Textile	·73	2·08	2·19	5·00
	4. Chemical Engg.	·10	·06	·11	·27
	5. Chemical Engg. and Technology	1·77 ·17	2·15 ·25	2·01 ·25	5·93 ·67
	6. Engineering	4·83 ·15	2·94 ·15	1·88 ·15	9·65 ·45
	TOTAL	7·90	7·73	6·62	21·25
II.—BOOKS. (For all Senior Deptts.)	For all Senior Deptts	·2	·22	·24	·66
III—FURNITURE and FITTINGS (For Senior Departments)	Ditto	·2	3·00	2·61	5·81
	TOTAL	·4	3·22	2·85	6·47
	TOTAL ADDITIONAL CAPITAL EXPENDITURE				85·88

Summary of additional staff and Financial Implications

[Proposed Development Plan]

RECURRING EXPENDITURE (*b*) (*i*) and (*ii*) (Computed on minimum of existing grades)

Designation	Number	Starting Salary in Rupees	Approximate Financial Implication in lakhs of Rupees
Professor	4	600	·288
Asstt. Professor	7	400	·336
Senior Lecturer	14	300	·5040
Lecturer (Technical)	12	210	·3024
Lecturer (Non-Tech.)	10	150	·1800
Foreman.	1	100	·0120
Overseers, Asstt. Instructors	20	75	·1800
Asstt. Demonstrator, Asstt. Foreman	..	..	..
Draftsman, Boiler Attendant, Electrician, Auto-mechanic, Fitter, Carpenter, Mason.	15	60	·1080
Laboratory Assistant	3	45	·0162
Bearer, Oilman, Fireman	18	25	·0540
Mistry and Tracer	25	40	·1200
Clerk and Typist	3	40	·0144
Peons	13	13	·0202
Cleaners and Coolies	5	13	·0078
Part-time Lecturers	18	100	·2160
TOTAL ADDITIONAL RECURRING EXPENDITURE ON ADDITIONAL STAFF SALARY			2·3590

DELHI POLYTECHNIC, DEPARTMENT OF COMMERCE

Proposed Development Plan

1. *Started in* :—1941.
2. *Affiliated to/recognised by* :—Government of India.
3. *Number of students applying for admission* — 48 (Diploma ... 20) (Certificate ... 28).
4. *Number actually admitted* — 27 (Diploma ... 12) (Certificate ... 15).
5. *Proposed Plan for Development* :—

(*a*) *Objective* :—

It is proposed to provide for degree course in Commerce. It is further proposed that the senior Departments of the Institution will be moved to a new site in the vicinity of the Delhi University where accommodation will be provided for 94 day students for Degree and/or All India Diploma Courses and 168 evening and/or Part-time students for the certificate courses.

(*b*) *Additional Expenditure involved* :—

Capital—

(*i*) Buildings—

Instructional and Residential	Effective floor area and cost have not been shown separately for the Department.

(*ii*) Additional Equipment during 1947-50 —

(Estimated cost in lakhs of rupees)

1947-48	1948-49	1949-50	Total
·10	·05	·03	·18

Recurring. Not Shown separately for the Department.

ENGINEERING COLLEGE, BENARES HINDU UNIVERSITY

Proposed Development Plan

1. *Started in* : 1919.

2. *Affiliated to/recognised by* : Benares Hindu University.

3. *Number of students applying for admission* : 2,022 in 1946.

4. *Number of students actually admitted* : 146 in 1946.

5. *Proposed Plan for Development* :

(*a*) *Objective* :—

The College now offers a combined course in Electrical and Mechanical Engineering. It is now proposed to offer separate courses in :

(1) Aeronautical Engineering ;
(2) Civil Engineering ;
(3) Electrical Engineering ;
(4) Mechanical Engineering.

(*b*) *Additional Expenditure involved* :—

Capital	Approx. Effective Floor-area in (1000 sq. ft.)	Cost in lakhs of Rs.
(*i*) Additional Buildings		
Instructional	129·1	12·91
Residential	66·9	6·69
(*ii*) Additional Equipment	..	11·86
(*iii*) Student Amenities	..	3·00
TOTAL ADDITIONAL CAPITAL COST	..	34·46

Recurring :—

(*i*) Additional staff—Number not stated	
(*ii*) Salaries of Teaching Staff	6·00
(*iii*) Salaries of other Staff	2·50
TOTAL ADDITIONAL RECURRING EXPENDITURE	8·50

List of additional equipment not available.

(N-9)

THOMASON COLLEGE OF ENGINEERING, ROORKEE

Proposed Development Plan

1. *Started in* :—1847.

2. *Affiliated to/Recognised by* :—U. P. Government.

3. *Number of students applying for admission* :

Civil Engg.	634
Mechanical and Electrical Engg.	600
Overseer	622
Draftsman	14

4. *Number actually admitted* :—

Civil Engg.	32
Mech. & Elect. Engg.	32
Overseers	84

5. *Proposed Plan for Development* :—

(*a*) *Objective* :—

A re-organisation Committee with Prof. C. L. Fortescue of the Imperial College of Science and Technology, London, as the Chairman was appointed by the U. P. Governor on December 9, 1945, to examine the working of the College in all its aspects so as to re-organise it on a basis that will make it more useful, more efficient and more up-to-date.

The following main recommendations made by the Committee for development of the College have been accepted by the U. P. Government and are being implemented :—

(1) Introduction of separate 3-Yr. courses in Electrical and Mechanical Engineering in addition to the existing 3-Yr. course in Civil Engineering, the respective admission numbers being restricted to 15, 15 and 35. After satisfactory establishment of the two new courses (*i*) a four-year course in Chemical Engineering is to be introduced in conjunction with Harcourt Butler Technological Institute, the students to spend two years in each college (*ii*) a special one-year course of a Post-Graduate character is to be instituted in each of the branches of Civil, Electrical and Mechanical Engineering, (*iii*) courses consisting of an appropriate selection of subjects from the courses in the three branches of Engineering are to be arranged for students wishing to enter Post-Graduate Colleges of Aeronautics in India, England and America, (*iv*) short courses in Engineering development to Engineers of P. W. D. Industry and members of the staff may be introduced as opportunity permits and occasion demands.

(2) (*i*) Recognition of the Diploma of the College as equivalent to a Degree for all appointments in India. The Government of India to be moved to accord such recognition.

(*ii*) Diploma for Advanced study (D. A. S., Roorkee) is to be awarded to students on successful completion of the fourth year courses of advanced study.

(3) An increase in the Teaching staff strength from 17 to 23, with revised higher scales of pay.

(4) Lecture and Class Rooms are to be renovated, re-arranged and in some cases refurnished and accoustically treated.

Old workshop buildings and buildings to be vacated by the School of Military Engineering are to be replanned to meet the requirements of the new courses for efficient supervision of students works.

Additional accommodation for Civil Engineering Laboratories and Class Rooms are to be provided by re-occupying the main buildings housing the Press at present.

(5) The Laboratory Equipment are to be modernised and re-grouped and further provision made for adequate apparatus for accurate measurements.

(6) Students Mess and Club are to be extended to accommodate double the number of students for which provison is made in the existing buildings.

Water supply storage for the whole Estate to be considerably increased and an out-door gymnasium to be established.

(7) The overseer class is to be retained at Roorkee re-constitutng it as the Thomason Overseer School and placing it under the control of the Principal of the College. Courses of instruction are to be modified.

(8) Re-organisation of the existing administration.

(*b*) *Additional Financial Implications* :—

Capital :—

Approximate Effective Floor-Area (1000 sq. ft.)	Cost in Lakhs of Rupees
*(*i*) Buildings (including alteration to Lecture rooms and Drawing Offices, re-arrangement and additions to Laboratories and additional accommodation for students).	
Instructional	·53
Residential	·85
Instructional and Residential	1·00
Total for Buildings	2·38
(*ii*) Laboratory Equipment (including re-arrangement of existing plants and purchase of new equipment).	
(1) Civil Engineering Section	1·06
(2) Electrical Engineering Section	1·93
(3) Mechanical Engineering Section and Workshop	1·82
(4) Mechanics Laboratory	·04
(5) Geological Laboratory	·09
(6) Unspecified Miscellaneous equipment with Contingencies	1·25
Total for Equipment	6·19
(*iii*) Library (additions and re-organisation)	·25
(*iv*) Temporary staff for effecting alterations to buildings, re-arrangement and re equipment of Laboratories and Workshops.	·10
Total Additional Capital Expenditure	8·92

(N-9)—*contd.*

Recurring :—

(*i*) Number of Additional Staff :—	6 (1 Professor, 2 Assistant Professors. 2 Lecturers and 1 Workshop Superintendent).
(*ii*) Staff Salaries (for proposed total staff)	Financial Implications (in Lakhs of Rupees).
(1) Salaries of Teaching Staff (Gazetted)	2·196
(2) Salaries of Subordinate Teaching Staff	·288
(3) Salaries of Administrative Staff	·490
(*iii*) Contingencies, Honoraria, Allowances and Examination Charges	1·506
(*iv*) Laboratory Grants	·180
(*v*) Library	·050
(*vi*) Scholarships	·250
(*vii*) Maintenance	·500
Total Recurring Expenditure	5·46
Less Budget Provision for 1946-47 on the basis of present conditions.	3·71
Total Additional Recurring Expenditure	1·75

**Details as per Lists attached* :

(*c*) Additional Information:—

(1) Cost of training students —

On full implementation of Fortescue Committee's proposal, the cost per student per annum will be Rs. 1600/- against the present cost of Rs. 1250/-.

(2) Affiliation to a University.

The recommendation of the Committee to the effect that the College should not itself be constituted as a Technological University has *not* been accepted by the U. P. Government.

(3) Title of the College—

The official title of the College has been changed from the " Thomason College of Civil Engineering " to the " Thomason College of Engineering ".

(4) Teaching Staff (Existing and Revised) with respective scales of pay. (Teaching staff will not be pensionable, but suitable contributory P. F. should be instituted.)

Existing			Revised		
Designation	Number	Scale of Pay (in Rupees)	Designation	Number	Scale of pay (in Rupees)
Principal	1	1,500—2,000	Principal	1	1,750—125—2,000
Professor	2	300—1,000	Professor	3	1,250— 50—1,750
Asstt. Professor	4	250—800	Asst. Professor	6	900— 40—1,000
Lecturer	10	200—600	Lecturer—		
			Grade I	6	300— 30—600
			Grade II	6	250— 20—450
			Workshop Supdt.	1	300— 30— 600—50—750
Total	17		Total	23	

Details of Financial statement.

1. Non-recurrent expenditure :—

(a) Buildings—

	Rs.
(*i*) Alteration of Overseer's quarters to render them suitable for Engineering students.	10,000
(*ii*) Alterations to Nurses' Quarters.	25,000
(*iii*) Alterations to buildings in Depot Battalion Lines to render them suitable for Overseer's use (instructional residential)	1,00,000
(*iv*) Providing increased accommodation in students' Mess and Club	23,000
(*v*) Acoustic treatment of Lecture Theatre . .	5.000
(*vi*) Conversion of two rooms at S. W. corner of main buildings into Drawing Office with north lighting.	10.000
(*vii*) Reconditioning of space vacated by Press	2,000
(*viii*) Extension of School of Military Duties building for Electrical Engineering Laboratories and Class rooms.	30,000
(*ix*) Conversion of Cinema building for use as lecture room (including re-furnishing).	5,000
(*x*) Establishment of out-door Gymnasium	1,000
(*xi*) New water storage tank, 20,000 gallons capacity . .	7,000
(*xii*) Improvement and extention of kitchens	4,000
(*xiii*) Extension and overhaul of septic tank system . . .	10,000
(*xiv*) Overhaul of latrines	6,000
TOTAL .	2,38,000

(N-10)

GOVERNMENT CENTRAL TEXTILE INSTITUTE, CAWNPORE

Proposed Development Plan

1. *Started in* :—1937, by amalgamating the Government School of Dyeing and Printing (1914) and the Government Textile School (1923).

2. *Affiliated to/Recognised by* :—U. P. Government.

3. *No. of students applying for Admission* :—211 in three different courses in 1946.

4. *No. actually admitted* :—64 in all the courses in 1946.

5. *Proposed Plan for Development* :—No information available.

GOVERNMENT CENTRAL WEAVING INSTITUTE, BENARES CANTT.

Proposed Development Plan

1. *Started in* :—1912 (as experimental weaving station) ; 1916 (Changed to present name).

2. *Affiliated to/Recognised by* :—Government of United Provinces.

3. *Number of students applying for admission*:—62.

4. *Number actually admitted* :—10.

5. *Proposed Development Plan* :—

(*a*) *Objective*—

1. To train technical personnel for development of the textile (cottage) industries.

2. To provide duly qualified and trained personnel to man the cottage industries.

3. To provide employment to educated young men.

4. To introduce modern methods of production design etc., with a view to increase the earning capacity of the cottage industry workers.

5. To provide for educational tours and 1 year's practical training outside the institution.

(*b*) *Additional Expenditure involved* :

Additional Capital Expenditure :

	Approx. floor are in 1000 sq. feet.	Estimated cost in lakhs of rupees
(a) Buildings—		
(*i*) Instructional	10·7	..
(*ii*) Residential student hostel (for 100).	10·0	..
Furniture for hostel		·040
(b) Equipment		0·35

Additional Staff required

Teaching staff	11
Other staff	20
Administrative staff	3
Research and Design staff	13

Additional recurring expenditure :—Information not available.

(N-12)

GOVERNMENT TECHNICAL INSTITUTE, GORAKHPUR

Proposed Development Plan

(1) *Started in* :—1909.

(2) *Affiliated to/Recognised by* :—U. P. Government.

(3) *Number of students applying for admission* :—178 Diploma Course, 20 and 75 for Certificate and Artisan Courses.

(4) *Number actually admitted* :—30 Diploma course, 15 and 30 in Certificate and Artisan Courses.

(5) *Proposed Plan for Development* :—

A scheme for occupational training is being prepared by the Director of Industries and Commerce, U. P. Government.

(N-13)

GOVERNMENT TECHNICAL INSTITUTE, JHANSI

Proposed Development Plan

(1) *Started in* :—1919.
(2) *Affiliated to/Recognised by* :—U. P. Government.
(3) *Number of students applying for admission* :—122.
(4) *Number actually admitted* :—27.
(5) *Proposed Plan for Development* :—

(*a*) *Objective* :—

(*i*) To provide for additional equipment at an estimated cost of Rs. 3,400/-

(*ii*) To extend the existing students hostel to provide for more accommodation.

(*iii*) To provide for better student amenities it is proposed to construct one reading room, two dining rooms, two kitchens, three store rooms, three bath rooms, one well for good drinking water, a garden and playgrounds. It is further proposed to overhaul and extend the electric installations.

(*b*) *Additional Expenditure involved* :—

Capital

	Approximate effective floor area in 1000 sq. feet.	Cost in lakhs of Rupees
(i) Additional buildings :—		
Instructional	*Nil.*	*Nil.*
Residential :		
Student Hostel		·30
Student amenities		·20
(*ii*) Additional Equipment		·034
Total additional capital cost .		0·534

Recurring :—No information available.

(N-14)

GOVERNMENT TECHNICAL INSTITUTE, LUCKNOW

Proposed Development Plan

(1) *Started in* :—1892 as the Industrial School, Lucknow. Raised to its present status when the Mechanics Class of Thomason Engineering College, Roorkee, was transferred to the School in 1910-11. Renamed Government Technical Institute in 1938.

(2) *Affiliated to/ Recognised by* :—U. P. Government.

(3) *Number of students applying for admission* :—264—Mechanical and Electrical Engineering Diploma Courses. 27—Certificate Courses.

(4) *Number actually admitted* :—34—Mechanical and Electrical Engineering Diploma Courses. 27—Certificate Courses.

(5) *Proposed Plan for Development* :—No plan for development available

(N-15)

GOVERNMENT METAL WORKS INSTITUTE, AMBALA CITY, PUNJAB

Proposed Development Plan

1. *Started in* :—1930.
2. *Affiliated to/Recognised by* :—Government of Punjab.
3. *Number of students applying for admission* ;—75.
4. *Number actually admitted* :—25.
5. *Proposed development Plan* :—No development plan available.

(N-16)

PUNJAB INSTITUTE OF TEXTILE, TECHNOLOGY, AMRITSAR (PUNJAB)

Proposed Development Plan

1. *Started in* :—1920 (Previous name was Government Central Weaving Institute).

2. *Affiliated to/Recognised by* :—Punjab Government.

3. *Number of students applying for admission* :—88.

4. *Number actually admitted* :—Not stated.

5. *Proposed plan for development* :—A re-organisation scheme has been proposed, particulars of which have been submitted by the Institute to the Provincial Government. Details not available.

(N-17)

TECHNICAL COLLEGE, DAYALBAGH, AGRA

Proposed Development Plan

1. *Started in* :—1927.

2. *Affiliated to/Recognised by* :—Recognised by the Industry and Commerce Department of the U. P. Government.

3. *Number of students applying for Admission* :—75 in Mechanical Engg. 95 in Certificate Courses.

4. *Number of students actually admitted* :—25 in 1946 in Mechanical and Electrical Engineering. 45 in Certificate Courses.

5. *Proposed Plan for Development* :—

(*a*) *Objective* :—

It is proposed

(1) to introduce a degree courses in Mechanical Engineering and Electrical Engineering and to admit 60 students per year.

(2) that after introduction of the above degree courses, the following courses may also be introduced :—

(*i*) Automobile Engineering, (*ii*) Radio Communication, (*iii*) Chemical Engineering, (*iv*) Hydro-electric Technology.

(*b*) *Additional expenditure involved* :—

Capital

	Approx floor area in 1000 sq. ft.	Estimated cost in lakhs of Rs.
(1) Buildings Instructional	45.29	6·522
Residential	26.94	4·760
Library, Furniture, etc.	..	1·950
(2) Equipments	..	13·400
TOTAL		26·632

Recuring Expenditure:—2·00 Lahks of Rupees.

Proposed Pay scale of staff :—

Principal	1,000—1,500
Professor	600—1,000
Reader and Workshop Supdt.	350—600
Lecturer	250—350

(N-18)

THE CIVIL ENGINEERING SCHOOL, LUCKNOW, LA-TOUCHE ROAD, LUCKNOW

Proposed Development Plan

1. *Started in* :—1922.
2. *Affiliated to/Recognised by* :—Government of United Provinces in 1934.
3. *Number of students applying for admission* : —300/400.
4. *Number actually admitted* :—90.
5. *Proposed Plan for development* : –

(*a*) *Objective* :—

Laboratory and Workshop to be equipped properly within 1947 and the buildings for the school to be constructed within three years—to meet the requirements indicated by the Government of United Provinces.

(*b*) *Additional Expenditure involved* :—

Additional Capital Expenditure

	Approximate floor area in 1,000 sq. ft.	Estimated cost in lakhs of Rs.
(a) Building—		
(i) Instructional	..	1·55
(ii) Residential	..	1·50
(b) Equipment	..	0·50
TOTAL	..	3·55

Additional recurring expenditure;—Not available.

Additional Strength of

Teaching Staff	4
Administrative staff	1

(N-19)

RAMPUR GOVERNMENT POLYTECHNIC, KHAS BAGH, RAMPUR STATE, U. P.

Proposed Development Plan

1. *Started in* :—1944, July (Started in July 1942 as Technical Inst. for Artisan course).

2. *Affiliated to/Recognised by* :—Rampur State Government.

3. *Number of students applying for admission* :—35.

4. *Number actually admitted* :—21

5. *Proposed plan for development* :—Information not available.

(N-20)

TECHNICAL COLLEGE, JODHPUR, RAJPUTANA

Proposed Development Plan

1. *Started in* :—1922.
2. *Affiliated to/Recognised by* :—Jodhpur Government.
3. *Number of students applying for admission* :—14.
4. *Number actually admitted* :—7.
5. *Proposed plan for development* :—No plan for development available.

(N-21)

THE ENGINEERING COLLEGE, CIVIL LINES, COLLEGE ROAD, LUDHIANA, PUNJAB

Proposed Development Plan

1. *Started in* :—1930 (May).
2. *Affiliated to/Recognised by* :—Information not available.
3. *Number of students applying for admission* :—Information not available.
4. *Number actually admitted* :—Information not available.
5. *Proposed Development Plan* :—

(*a*) *Objective* :—

1. To provide for adequate space, equipment and staff for efficiently running the institution in order to train 40 students every year.

(*b*) *Additional expenditure involved* :—

Additional Capital Expenditure :—Information not available.

Approximately 19,50,000 sq. ft. is needed for building of college, Hostel, playground, staff quarters etc.

Additional Recurring Expenditure :—

Annual grant of Rs. 50,000 is needed to meet the expenditure on the salaries of the staff, etc.

(N-22)

GOVERNMENT SCHOOL OF ARTS AND CRAFTS, LUCKNOW

Proposed Development Plan

1. *Started in*:—1917.
2. *Affiliated to/Recognised by*:—United Provinces Government.
3. *Number of students applying for admission*:—50.
4. *Number actually admitted*:—40.
5. *Proposed Plan for Development*:—No plan for development available The matter of reorganisation of the Institution is under the consideration of the Department of Industries, United Provinces.

(N-23)

BANARAS HINDU UNIVERSITY, DEPARTMENT OF COMMERCE

Proposed Development Plan

1. *Started in* :—Not known.

2. *Affiliated to/Recognised by*:—Banaras Hindu University.

3. *Number of students applying for admission* :— No information available.

4. *Number actually admitted* :— 134 ... I.Com.
103 ... B.Com.
20 ... M.Com.

5. *Proposed Plan for Development* :— No plan for development available.

(N-24)

BIKRAM COLLEGE OF COMMERCE, FARIDKOT, PUNJAB

Proposed Development Plan

1. *Started in*:—1945.
2. *Affiliated to/Recognised by*:—University of the Punjab.
3. *Number of students applying for admission*:—12.
4. *Number of actually admitted*:—4.
5. *Proposed Plan for Development*:—Information not available.

(N-25)

SETH G. B. PODAR COLLEGE, NAWALGARH—(JAIPUR STATE)

Proposed Development Plan

1. *Started in*:—1930 as a high School; developed into an intermediate college in 1942; raised to degree standard in 1945.

2. *Affiliated to/Recognised by*:—Rajputana University.

3. *Number of students applying for admission*:—75.

4. *Number actually admitted*:—75.

5. *Proposed Plan for Development*:—It is proposed to provide facilities for acturial training for the students in B. Com. and M. Com. Classes.

(N-26)

SHYAM SUNDER MEMORIAL COLLEGE, CHANDAUSI

Proposed Development Plan

1. *Started in* :—1902; raised to Degree Standard in 1946.
2. *Affiliated to/Recognised by* :—Agra University.
3. *Number of students applying for admission* :—100.
4. *Number actually admitted* :—77.
5. *Proposed Plan for Development* :—No plan for Development,

(S-1)

ERSKINE COLLEGE OF NATURAL SCIENCES, WALTAIR,

ANDHRA UNIVERSITY

Proposed Development Plan

1. *Started in* :—1941 (July)
2. *Affiliated to/Recognised by* :—*Andhra University.*
3. *Number of students applying for admission* :—*60.*
4. *Number actually admitted* :—*18.*
5. *Proposed Plan for development* :—Is not available.

(S-2)

INDIAN INSTITUTE OF SCIENCE, BANGALORE

Proposed Development Plan

1. *Started in* :—July, 1911.
2. *Affiliated to/Recognised by* :—Government of India.
3. *Number of students applying for admission* :—619
4. *Number actually admitted* :—85.
5. *Proposed Plan for development.*

(*a*) *Objective*:—

(*i*) To place on a sound and efficient basis the research and teaching activities of the Institute which are already existing or have been recently approved by the Government of India. Four Year Programme of Development with estimates of capital and annual recurring expenditures has been submitted. The estimates are for additional funds necessary for a small increase in the teaching staff to raise the efficiency of the courses of instruction and to bring the Research Facilities of the existing Departments, up-to-date, maintenance of workshop and laboratory equipment, water, gas, electric services, etc. Buildings, roads, and lands—Increased grants for Research work, consumable and special stores—Students Hostels and Staff Quarters.

(The Government of India have agreed to the principles and have already provided for a grant of 9·7 lakhs Capital and 2·475 lakhs Recurring towards implementation of the 1st Year Programme, which envisages developments in the Departments of Metallurgy, Internal Combustion Engineering, General Chemistry Section. Increment in scales of salaries and Re-organisation of the Director's office, etc.) It has been stressed that until these activities have been placed on a sound footing, considerations of new schemes of development will be premature.

(*ii*) Establishment of a Post-Graduate Power Engineering Department. Details in respect of equipment, buildings, laboratory, cost, (Capital and Recurring), curricula of Study, syllabus, staff, etc, have been submitted and accepted by the Government of India in principle.

(*b*) ***Additional Expenditure involved*** :-

* ***For* (*i*) *in* (*a*)**

	Approximate Effective Floor Area (1,000× sq. ft.)	Cost in lakhs of Rupees.
Capital		
(i) Additional Buildings :—		
Instructional (Buildings and Equipment) . .	..	**32·50**
Residential	**45·0**	**4·50**
(ii) Other Contingencies (Maintenance of water, gas, road, buildings, etc.)	..	**3·00**
TOTAL ADDITIONAL CAPITAL COST.	..	**40·00**

***Details as per lists attached.**

(S-2)—*contd.*

	Approximate Effective Floor Area (1,000 sq. ft.)	Cost in lakhs of Rupees.
Recurring.—		
(i) Additional Staff—About 10 (2 Profs., 5 Asstt. Profs., 3 Junior staff)		..
(ii) Additional Staff Salary and Workshop, Lab. Expenses.	..	3·55
(iii) Other Contingencies	..	25
TOTAL ADDITIONAL RECURRING EXPENDITURE . . .	..	3·80
*For (ii) in (a)		
Capital—		
(i) Additional Buildings :—		
Instructional	49·5	5·668
Residential (Students)	30	3.00
Residential (Staff)†	30	3·00†
		† (Interest free Loan to be repaid in 30 yrs. @ Rs. 10,000 per year and is not included in the total.)
(ii) Additional Equipment	..	28,35
TOTAL ADDITIONAL CAPITAL COST	..	37·018
Recurring.—		
(i) Additional Staff—No. Not mentioned.	..	..
(ii) Additional Staff Salary	..	2·34
(iii) Other Contingencies	..	..
Power Station Running	..	·50
Maintenance of Lab.	..	·80
Quarters, Hostels, Misc.	..	·25
TOTAL ADDITIONAL RECURRING EXPENDITURE . . .	..	3·89

*Details as per lists attached.

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Summary of additional expenditure involved for maintaining on an efficient basis the research and teaching activities of the institute.

Departments	Details of expenditure	Financial implications in lakhs of Rupees.	
		Capital	Recurring
I. Department of Pure and Applied Chemistry :—			
(i) General Chemistry Section .	(a) For buildings and equipment for applied chemistry and chemical engineering laboratories.	3·00	..
	(b) For an additional Prof. of Applied Chemistry and Asstt. Prof. of Chem. Engg. and Addtional workshop and Lab. expenses.	..	·40

(S-2)—*contd.*

Departments	Details of expenditure	Financial Implications in Lakhs of Rupees.	
		Capital	Recurring
(ii) Organic Chemistry Section .	(a) For addl. rooms and equipment for microchem. and high vacuum distillation work.	·50	..
	(b) Addl. workshop and Lab. facilities.	..	·10
(iii) Fermentation Technology Section.	(a) Addl. buildings and equipment.	1·00	..
	(b) Addl. Asst. Prof. and workshop and Lab. expenses	..	·15
	TOTAL	4·50	·65
II. Department of Biochemistry :—			
(i) Food Technology Section .	(a) For addl. buildings and equipment and for research on vitamin and glandular products.	2·50	..
	(b) Addl. Asst. Prof. and workshop and Lab. expenses.	..	20
(ii) Pharmacology Section .	(a) Addl. buildings and equipment.	3·00	..
	(b) Addl. Asst. Profs. of Pharmacology and Bacteriology and workshop and Lab. expenses.	..	.30
	TOTAL	5·50	·50
III. Physics	(a) For building and equipping a new Physics Lab.	3·00	..
	(b) Addl. workshop and Lab. expenses	..	·10
	TOTAL	3·00	·10
IV. Department of Elect. Technology :—			
(i) High Voltage and Heavy Engg. Sec.	(a) Adequate equipment for high voltage Engg. and testing Lab. with suitable equipment for the design and calculation of performance of high voltage transmission line and power net works Buildings.	10·00	..
	(b) A Prof. for high voltage Engg., addl. Junior staff and Lab. and working expenses.	..	·45
(ii) Communication Engg. Section.	(a) New buildings and equipment	3·00	..
	(b) Addl. Lab. and working Expenses.	..	·15
	TOTAL	13·00	·60
V. Department of Aeronautical Engg.	(a) Addl. buildings and Lab. equipment (excluding Central Govt. Grant of 2·00)	1·00	..
	(b) Addl. Lab. and workshop expenses	..	·15

(S-2)—*contd.*

	Departments	Details of expenditure	Financial Implications in Lakhs of Rupees.	
			Capital	Recurring
VI.	Department of Metallurgy ·	(a) Addl. buildings and Lab. equipment (in addition to the Capital grant of 1 lakh by the Central Government)	2·50	..
		(b) Addl. Junior Staff, Lab. and working expenses (In addition to the Central Government Grant of ·37 Lakhs.)	..	·30
VII.	Department of Applied Mechanics with Special reference to Internal Combustion Engines.	(a) For buildings and Equipment	3·00	..
		(b) Addl. Junior staff, Lab. and working expenses.	..	·45
VIII.	Students Hostels and Clubs, etc.	Additional Hostel buildings for accommodation of students and research workers whose number has increased from 57 in 1921 (when the existing Hostel was built) to 228 in 1945.	2·50	..
IX.	Central Services Electric Power House, maintenance of water, gas, sanitary systems, roads and buildings.	(a) Building an electric Power House, complete overhauling of the electric installations and sanitary fittings.	3·00	..
		(b) For maintenance of water, gas, road, buildings.	..	·25
X.	Staff Quarters . . .	Quarters for the Profs. of Aeronautical Engg. Metallurgy and Internal combustion Engg. and some junior staff in new departments.	2·00	..
XI.	Increment in scale of salaries and re-organisation of Director's office and dearness allowance.		..	·80
GRAND TOTAL	. . .		**40·00**	**3·80**

(S-2)—*concld.*

INDIAN INSTITUTE OF SCIENCE BANGALORE

Summary of capital cost and annual recurring expenditure involved for the establishment of a post graduate Power Engineering Department.

Capital cost:—

Laboratory, Workshop and power plant :—

Item	Buildings		Equipment	Total cost in lakhs of Rupees
	Effective Floor area (1,000 sq. ft.)	Cost in lakhs of Rupees.		
1. Addl. Equipment and replacement of obsolete equipment in the existing Deptt. of Elect. Technology.	15·0	1·20	2·0	3·20
2. Net work calculator—A. C. Caloulation Bd. containing generators, etc.	1·5	·12	2·55	2·67
3. Addl. equipment for elect. workshops, overloadand underground construction and cable jointing workshops.	2·0	·16	1·08	1·24
4. Hydraulics	12·0	1·44	3·535	4·975
5. Materials Testing	6·0	·72	1·43	2·15
6. Hydrodynamics	5·0	·40	·26	·66
7. Generating Station	8·0	1·628	15·345	16·973
8. Students' Hostel, Dining Room Commonrooms, etc.	30·0	3·00	·60	3·60
9. Addition to Library	..	..	·75	·75
10. Miscellaneous	..	..	·80	·80
GRAND TOTAL	79·50	8·668	28·35	37·018

Quarters for staff (5 Professors, 8 Asst. Profs. and 2 Lecturers) (Interest free loan for Rs. 3 lakhs to be repaid in 30 years at the rate of Rs. 10 00 a year).

Recurring **:—**

Items	Amount in lakhs of Rupees
1. Staff :—	
Teaching	**2·00**
Power Station	**·34**
2. Power Station Running	**·50**
3. Maintenance of Laboratories including salary of mechanics and additions to the Library	**·80**
4. Quarters, Hostels, Miscellaneous	**·25**
TOTAL ADDITIONAL RECURRING EXPENDITURE	**3·89**

(S-3)

THE JEYPORE VIKRAMADEO COLLEGE OF SCIENCE AND TECHNOLOGY, WALTAIR, ANDHRA UNIVERSITY

Proposed Development Plan

1. *Started in* :—1933 (July).

2. *Affiliated to/Recognised by* :—Andhra University.

3. *Number of students applying for admission* :—80 (Degree) +20 (Post-Graduate & Research).

4. *Number actually admitted*:—36 (Degree)+6 (Post Graduate & Research).

5. *Proposed Plan for development* :—No plan for development available.

(S-4)

ALAGAPPA CHETTIAR COLLEGE OF TECHNOLOGY GUINDY, SAIDAPET P. O. MADRAS

Proposed Development Plan

1. *Started in:*—1944 (July).
2. *Affiliated to/Recognised by:*—Madras University.
3. *Number of students applying for admission:*—207.
4. *Number actually admitted* :—40.
5. *Proposed Plan for development:*—

The construction of the main building is under progress.

It is expected that immediately, a floor area of about 70,000 sq. ft. will be completed. Ultimate floor area of the building will be about 1,80,000 sq. ft. with provision for further expansion.

(S-5)

ARTHUR HOPE COLLEGE OF TECHNOLOGY, COIMBATORE, PEELAMENDU, P. O. MADRAS

Proposed Development Plan

1. *Started in*:—1945.
2. *Affiliated to/Recognised by*:—Madras University.
3. *Number of students applying for admission*:—703.
4. *Number actually admitted*:—96.
5. *Proposed Plan for development*:—
   (*a*) *Objective*:—
      (*i*) To provide for additional staff, space and equipment for efficiently educating a student body of 300.
      (*ii*) To provide Hostels for students; details of plan and financial implications not stated.

Remarks :—

The college is still in the formative stage and will probably take another 2 or 3 years for developments contemplated.

Extra staff are being sanctioned by the Government as and when required.

(S-6)

COLLEGE OF ENGINEERING, GUINDY, SAIDAPET, MADRAS

Proposed Development Plan

1. *Started in*:—Started as a Survey School in 1794 and developed into a College of Engineering in 1886.

2. *Affiliated to/Recognised by*:—University of Madras. A Government college.

3. *Number of students applying for admission*:—1067 for degree and 350 for Diploma Courses in 1946.

4. *Number actually admitted*:—124 for Degree and 90 for Diploma courses in 1946.

5. *Proposed Plan for Development*:—

(*a*) *Objective*:—

(*i*) Extension of College Main Buildings and Development of Mechanical Engineering Laboratory with additional accommodations for Drawing Office (10,000 Sq. ft.) and Workshop (3,200 Sq. ft.).

(*ii*) Construction of a new laboratory for Highway Engineering.

(*iii*) Building an additional hostel for accommodating 200, student with provisions fors ports pavilion and Assembly Hall and additional Residential Quarters for 30 members of the staff.

(*iv*) To make provision for additional staff on the basis of 20 students per teacher in Drawing, and Design classes and 10 per teacher in the Laboratory.

(*b*) *Additional Expenditure involved* :—

Capital	Approximate Effective Floor Area (1,000s q. ft.)	Cost in Lakhs of Rs.
(i) Additional Buildings.—		
Instructional	**63·2**	**6·32 For (i) in (a)**
Residential	**Not specified.**	
(ii) Additional Equipment (with buildings)—		
High Engg. Lab.	**..**	**2·35 For (ii) in(a)**
Development of Mech. Engg. Lab.	**..**	**2·50 For (i) in(a)**
(iii) Additional Students' Amenities	**Not Specified.**	
TOTAL ADDITIONAL CAPITAL COST	**..**	**11·17**
Recurring.—		
(i) Additional Staff	**Number not specified.**	
(ii) Additional Staff Salary	**"**	**"**
(iii) Other Contingencies.	**"**	**"**

TOTAL ADDITIONAL RECURRING EXPENDITURE—Not Specified

(S-7)

COLLEGE OF ENGINEERING, UNIVERSITY OF TRAVANCORE

Proposed Development Plan

1. *Started in:*—1939.

2. *Affiliated to/Recognised by:*—Affiliated to the University of Travancore.

3. *Number of students applying for admission:*—259 for degree courses.
168 for Diploma courses.
73 for Certificate courses.

4. *Number actually admitted:*—
49 to degree course.
53 to diploma course.
58 to certificate course.

5. *Proposed plan for development.*—

It is proposed to introduce—

(1) a course in Chemical Engineering.*

(2) To start separate courses in:—

- (*i*) Highway Engineering
- (*ii*) Irrigation Engineering.
- (*iii*) Public Health Engineering.
- (*iv*) Structural Engineering.
- (*v*) Production Engineering.
- (*vi*) Power Engineering.
- (*vii*) High voltage and Power supply.
- (*viii*) Communication Engineering.

(*b*) *Additional expenditure involved.*—

Capital	App. effective floor area (1,000sq. ft.)	Cost in lakhs of Rupees
(i) Additional Buildings :—		
INSTRUCTIONAL—		
(under construction)	20	2·0
Residential (Proposed)	..	..
(ii) Additional Equipment :—		
Structural Engineering	..	1·0
Highway Engineering	..	0·75
Public Health Engineering	..	0·50
Irrigation Engineering	..	1·00
Power Supply Engineering :—		
Electrical Design and Manufacture	..	0·50
Standardising Laboratory	..	1·00
High-Voltage Engineering	..	1·00
Power Engineering	..	0·50
Production Engineering	..	0·50
TOTAL ADDITIONAL CAPITAL COST	..	8·75

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* Chemical Engineering course has been introduced from 1947—48 for graduates in Chemistry.

COLLEGE OF ENGINEERING (VIZAGAPATAM) COCANADA

Proposed Development Plan

1. *Started in* :—July, 1946. A Government College.
2. *Affiliated to/Recognised by* :—Madras University.
3. *Number of students applying for admission on* :—1500. (Applications for the three Engineering Colleges have been common.)
4. *Number actually admitted* :—105.
5. *Proposed plan for Development* :— *

(*a*) *Objective* :—

*Newly started College in accordance with the Post-war Five year Plan of the Madras Government to meet the demand for Technical Personnel for Post-war developments. It is temporarily located in Cocanada for a period of 2 years, pending construction of permanent buildings in Vizagapatam.

(S-9)

COLLEGE OF ENGINEERING, BANGALORE, MYSORE

Proposed Development Plan

1. *Started in* :—1917.
2. *Affiliated to/Recognised by* :—University of Mysore.
3. *Number of students applying for admission* :—714.
4. *Number actually admitted* :—170.
5. *Proposed plan for development* :—Not specified.

(S-10)

DEPARTMENT OF ENGINEERING AND TECHNOLOGY, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR, SOUTH INDIA

Proposed Development Plan

1. *Started in* :—1945.
2. *Affiliated to/Recognised by* :—Annamalai University.
3. *Number of students applying for admission* :—Information not available.
4. *Number actually admitted* :—229 in 1946.
5. *Proposed plan for development* :—

    (*a*) *Objective* :—Information not available.

ENGINEERING COLLEGE, ANANTPUR, (Now at GUINDY, MADRAS) Proposed Development Plan

1. *Started in* :—1946. (Not yet in full operation; Buildings and laboratories under constructions) A Govt. College.

2. *Affiliated to/Recognised by* :—University of Madras.

3. *Number of students applying for admission on* :—No information available.

4. *Number actually admitted* :—50

5. *Proposed plan for development* : *

   (*a*) *Objective* :—

---

* To meet the large demand for technically qualified men for Post-war Works, the Govt. of Madras decided in 1946 to start two more Engineering Colleges, one at Anantpur and another at Vizagapatam. Buildings and Laboratories for the former are under construction at Anantpur, where the College is expected to shift in July 1948. 50 students selected for the first two years are being trained in Guindy Engineering College.

(S-12)

OSMANIA ENGINEERING COLLEGE, P. O. LALLAGUDA, HYDERABAD DECCAN

Proposed Development Plan

1. *Started in* :—1929.
2. *Affiliated to/Recognised by* :—Osmania University.
3. *Number of students applying for admission* :—227.
4. *Number actually admitted* :–Mechanical Engineering 55. Civil Engineering:—no information.
5. *Proposed plan for development* :—(*a*) *Objective.*

It is proposed:—

(*i*) to provide for space, staff and equipment for efficiently running the institution ;

(*ii*) to provide quarters for staff ;

(*iii*) to open a degree course in Electrical Engineering.

(*b*) *Financial implication* :—About Rs. 1·35 lakhs worth of equipment have been sanctioned for the current year.

Further details of the plan have not been submitted.

(S-13)

SRI KRISHNA RAJENDRA SILVER JUBILEE TECHNICAL INSTITUTE BANGALORE, MYSORE

Proposed Development Plan

1. *Started in* :—1938 (Degree Course in Textiles started in 1946).

2. *Affiliated to/Recognised by* :—University of Mysore.

3. *Number of students applying for admission* :—206.

4. *Number actually admitted* :—38.

5. *Proposed plan for development* :—

(*a*) *Objective* :—

(*i*) To provide for adequate facilities in staff, space and equipment for efficiently running the institution upto degree standard in Textiles.

(*ii*) To provide for better students amenities it is proposed to have free reading room, annual Educational Tours, arrangements for frequent visit to mills, in addition to sports and union activities already in existence.

(*iii*) To provide hostels for students in a rented house (Rs. 500/- per annum).

(*b*) *Additional Expenditure involved* :—

Capital—

	Estimated cost in lakhs of Rupees
(i) Buildings Instructional	3·00
*(ii) Additional Equipments	4·20
Total additional capital cost	7·20

Recurring—

*(i) Additional Staff	26 in number Financial implication in lakhs of Rupees.	
*(ii) Additional Staff Salary	0·21	
TOTAL ADDITIONAL RECURRING EXPENDITURE	0·21	..

***Details as per lists attached.**

(S-13)—*contd.*

EXPANSION SCHEME RECURRING EXPENSES (STAFF)

Details

	Salary per month Rs.	Annual expenditure Rs.	Total Rs.
Professor in Textile Technology	400—30—700	4,800	4,800
SECTION I.			
Assistant Professor in Spinning	200—25/2—300	2,400	
Spinning Shed Supervisor	40—5/2—60	480	
Foreman—Blow Room Section	40—5/2—60	480	
Attender—Blow Room Section	15—1—20	180	
Foreman—Carding Section	40—5/2—60	480	
Attender—Carding Section	15—1—20	180	
Foreman—Speed Frames and Spinning Section	40—5/2—60	480	
Attender—Speed Frames and Spinning Section	15—1—20	180	
Foreman—Woollen, Carding and Spinning Section	40—5/2—60	480	
Attender—Woollen, Carding & Spinning Section	15—1—20 (2)	360	
Silk Reeler—Silk Reeling Section	15—1—20	180	
Attender—Silk Reeling Section	15—1—20	180	6,060
SECTION II.			
Assistant Professor in Design and Ornament	200—25/2—300	2,400	
Weaving Shed Supervisor	40—5/2—60	480	
Design Assistant	40—5/2—60	480	
Handloom Assistant	40—5/2—60	480	
Attenders	15—1—20 (3)	540	
Day Watchman for all the sections	Rs. 12/-	144	4,529
SECTION III.			
Assistant Professor in Textile Chemistry	200—25/2—300	2,400	
Dye House Supervisor	40—5/2—60	480	
Woollen Finishing Assistant	40—5/2—60	480	
Attenders	15—1—20 (2)	360	3,720
SECTION IV.			
Research Assistant—Physical Section	75—5—100	900	
Research Assistant—Chemical Section	75—5—100	900	
Attender—(Chemical Section)	15—1—20	180	1,980
		TOTAL Rs.	21,084 or 21,100

ABSTRACT OF COST OF MACHINERY TO BE PURCHASED

	As per list Rs.	As sanctioned Rs.
I. Cotton Spinning	73,300	80,000
Woollen Spinning	39,500	50,000
Silk Spinning	76,100	80,000
II. Textile Design and Manufacturing	73,500	80,000
III. Dyeing, Bleaching, etc.	1,28,500	1,10,000
IV. Testing Section	20,000	20,000
Erection, etc.	9,100	..
TOTAL	4,20,000	4,20,000

(S-14)

GOVERNMENT SCHOOL OF TECHNOLOGY, POPHAMS BROADWAY, MADRAS

Proposed Development Plan

1. *Started in* 1918:—developed into Government school of Technology in 1938.
2. *Affiliated to/Recognised by*:—Government of Madras.
3. *Number of students applying for admission*:—495 (part-time) × 300 (full time)
4. *Number actually admitted*—163 (Part-time)+116 (full time)
5. *Proposed plan for development*:—

   (*a*) Object—Due to the introduction of new courses in August, 1946, it is proposed to provide for adequate space and equipment to run these departments efficiently.

   (*b*) Additional Expenditure involved (For three years).

	Approx. floor area in 1,000 sq. ft.	Estimated cost in lakhs of Rs.
I. Capital— Buildings (i) Instructional (ii) Residential	..	8·00
II. Equipment	..	4·00
TOTAL		12·00

Recurring Expenditure not stated.

(S-15)

GOVERNMENT TEXTILE INSTITUTE, WASHERMANPET, MADRAS

Proposed Development Plan

1. *Started in:*—1923.
2. *Affiliated to/Recognised by:*—Government of Madras.
3. *Number of students applying for admission:*—
4. *Number of students admitted:*—105.

Proposed plan for development :—

(*a*) *Objective:*—It is proposed :—

(1) To start a diploma course in Power spinning and weaving.

(2) To introduce certain new courses, *viz.*, Instruction in Bleaching, dyeing and cloth printing, etc.

(3) To provide for adequate staff and equipment.

(*b*) Additional Expenditure involved :—

Additional Capital Expenditure :—

Buildings	2·00	
Equipment	3·89	
	5·89	Lakhs of rupees.

Additional recurring expenditure :—0·59 lakhs of rupees.

Additional staff required :—

Teaching staff	6
Other staff	10
TOTAL	16

(S-16)

INSTITUTE OF TEXTILE TECHNOLOGY, TRIVANDRUM, TRAVANCORE

Proposed Development Plan

1. *Started in*:—1938.
2. *Affiliated to/Recognised by*:—University of Travancore.
3. *Number of students applying for admission*:—41.
4. *Number of students actually admitted*:—24.
5. *Proposed Plan for Development*:—The Textile Institute will form an integral part of a new Polytechnic which has been sanctioned by the Travancore Government. It is proposed to modernise and expand the existing shops and laboratories, and add a Textile Testing Laboratory at a cost of about Rs. 3 lakhs. It is also proposed to appoint suitably qualified staff.

(S-17)

INSTITUTE OF LEATHER TECHNOLOGY, WASHERMANPET, MADRAS

Proposed Development Plan

1. *Started in*:—1916, reorganised in 1946.
2. *Affiliated to/Recognised by*:—Government of Madras.
3. *Number of students applying for admission*:—Information not available.
4. *Number actually admitted*:—20.
5. *Proposed Development plan*:—Details of the plan not available.

Additional Expenditure involved will be :

Rs. 2,45,000	for Buildings
Rs. 88,000	for equipments
Total Rs. 3,33,000	

(S-18)

OSMANIA TECHNICAL COLLEGE, HYDERABAD, DECCAN

Proposed Development Plan

1. *Started in:*—1922 as the Osmania Central Technical Institute. Renamed Osmania Technical College in 1930 with initiation of Diploma Courses in Mechanical and Electrical Engineering.
2. *Affiliated to/Recognised by:*—H.E.H. the Nizam's Government.
3. *Number of students applying for admission:*—Information not available.
4. *Number actually admitted:*—Information not available.
5. *Proposed Plan for Development:*—Schemes under preparation.

Details not available.

(S-19)

SRI JAYACHAMARAJENDRA OCCUPATIONAL INSTITUTE, BANGALORE MYSORE

Proposed Development Plan

1. *Started in:*—1943 (August).
2. *Affiliated to/Recognised by:*—Mysore Government.
3. *Number of students applying for admission:*—327.
4. *Number actually admitted:*—Not known.
5. *Proposed plan for development:*—

(*i*) The institution was started during the war, so it has not yet been fully equipped. Orders for Additional equipment, worth 4 lakhs of rupees, have already been placed.

Construction of Additional Buildings are in progress.

(*ii*) It is proposed to extend the present laboratories and workshop to provide adequate space for new equipments.

(*iii*) It is proposed to construct a new hostel for students.

Details not available.

(S-20 to 25)

GOVERNMENT OF MADRAS POLYTECHNICS

1. The Karnataka Polytechnic, Mangalore.
2. The Kerala Polytechnic, Calicut.
3. The Dravida Polytechnic—Madras, Mudura.
4. The A.G. Polytechnic, Vuyyur.
5. The Central Polytechnic, Madras.
6. The Andhra Polytechnic, Coconada.

Proposed Development Plan :—

1. *Started in*:—July 1946 (All the above institutions are functioning from the date but formal sanction has been obtained only in respect of one : for others, it is soon expected).

2. *Affiliated to/Recognised by*:—Government of Madras.

3. *Number of students applying for admission*:—2,300.

4. *Number actually admitted*:—460.

5. *Proposed Development Plan*:—

(*a*) *Objectives*:—It is proposed—

I To introduce additional diploma course in the Polytechnics as shown below :—

(*i*) Fisheries Technology in the Karnataka Polytechnic.

(*ii*) Civil Engineering in the Kerala Polytechnic.

(*iii*) (a) Sanitary Engineering.
(b) Radio Engineering.
(*iv*) (a) Sanitary Engineering.
} In the Dravida Polytechnic.

(b) Chemical Engineering and Food Technology. } In the A. G. Polytechnic, Vuyyur.

(*v*) (a) Automobile Engineering.
(b) Radio Engineering.
} In the Andhra Polytechnic.

II. To establish fully equipped Polytechnics in their own buildings and to train youngmen in different branches of Engineering to diploma standard.

(*b*) *Additional Expenditure*:—

Capital—

Name of the Institution	Estimated cost in lakhs of rupees (Buildings).
Karnataka Polytechnic	7·0
Kerala Polytechnic	7·0
Dravida Polytechnic	4·0
Central Polytechnic	3·0
A.G. Polytechnic	5·0
Andhra Polytechnic	7·0

(S—20 to 25)—*contd.*

Name of the Institution	Estimated cost in lakhs of rupees (Equipment)
Karnataka Polytechnic	5·81
Kerala Polytechnic	9·46
Dravida Polytechnic	6·27
Central Polytechnic	6·59
A. G. Polytechnic	9·18
Andhra Polytechnic	7·47
TOTAL	77·78

Recurring Expenditure—

Name of the Institution	Expenditure in lakhs of rupees
1. The Karnataka Polytechnic	1·72
2. The Kerala Polytechnic	1·92
3. The Dravida Polytechnic	1·82
4. The Central Polytechnic	1·85
5. The Andhra Polytechnic	2·08
6. The A.G. Polytechnic	1·97

(S-26)

CENTRAL SCHOOL OF ARTS AND CRAFTS, HYDERGUDA, HYDERABAD, DECCAN

Proposed Development Plan

1. *Started in*:—1940.
2. *Affiliated to/Recognised by*:—Nizam’s Government.
3. *Number of student applying for admission*:—120.
4. *Number actually admitted*:—Information not available.
5. *Proposed plan for development*:—

It is proposed to construct a new building for the institution. Details of plan and financial implications not available.

(S-27)

H. H. THE MAHARAJA'S SCHOOL OF ARTS, TRIVANDRUM, SOUTH INDIA

Proposed Plan for Development

1. *Started in*:—1889.
2. *Affiliated to/Recognised by*:—University of Travancore and Madras Government Technical Examination Board.
3. *Number of Students applying for admission*:—Diploma—34, Artisan course—46.
4. *Number actually admitted*:—Diploma 18, Artisan course—17.
5. *Proposed Plan for development*:—Information not available.

(S-28)

THE SCHOOL OF ARTS AND CRAFTS, MADRAS, POONAMALHI HIGH ROAD, PARK TOWN, MADRAS

Proposed Development Plan

1. *Started in*—1850:—from 1852 under Government of Madras.
2. *Affiliated to/Recognised by*:—Government of Madras.
3. *Number of students applying for admission*:—40
4. *Number actually admitted*—:25.
5. *Proposed Plan for development*:—

The School was re-organised in July, 1946. Plans such as strengthening of the existing departments or extending their scope will be considered on further development of the scheme.

Purchase of equipments worth about Rs. 19,000 has already been sanctioned by Government of Madras.

(S-29)

CENTRAL COLLEGE, BANGALORE

Proposed Development Plan

1. *Started in*:—Started in January 1858 as Bangalore High School and renamed the Central College in 1875, and was affiliated to the Madras University.

2. *Affiliated to/Recognised by*:—University of Mysore.

3. *Number of students applying for admission*:—428.

4. *Number actually admitted*:—300 (Commerce).

5. *Proposed Plan for Development*:—

It is stated that consequent on an increase in the strength of the student body it has become imperative to construct new buildings for Instructional and Residential purposes and also to provide additional staff and student amenities.

Details of plan and financial implications have not been made available.

(S-30)

CENTRAL SCHOOL OF COMMERCE, HYDERABAD, DECCAN

Proposed Development Plan

1. *Started in:*—1944 (An expansion of the Commercial Section of the Osmania Technical College in pursuance of the recommendations of Mr A. Abbott).

2. *Affiliated to /Recognised by:*—H.E.H. the Nizam's Government.

3. *Number of students applying for admission:*—28 (Commerce).

4. *Number actually admitted:*—26 (Commerce).

5. *Proposed Plan for Development:*—It is proposed to construct a new building. Details have not yet been worked out.

SANATANA DHARMA COLLEGE, ALLEPPYE, TRAVANCORE

Proposed Development Plan

1. *Started in*:—1946 (19th June).
2. *Affiliated to / Recognised by*:—All India Council for Technical Education, Govt. of India.
3. *Number of students applying for admission*:—150.
4. *Number actually admitted*:—101.
5. *Proposed Plan for Development*:—

   (*a*) *Objective*:—It is proposed to convert the college into a Residential one within two years, after shifting it to a new site covering about 5 acres. The Commerce Section would be accommodated in a separate block of the new buildings to be constructed.

Details of plan and financial implications not available.

(E-1)

UNIVERSITY COLLEGE OF SCIENCE AND TECHNOLOGY (APPLIED PHYSICS AND APPLIED CHEMISTRY DEPARTMENT)

CALCUTTA UNIVERSITY, CALCUTTA

Proposed Development Plan

1. *Started in*—1914:—Department of Applied Chemistry started in 1920 and Applied Physics in 1925.

2. *Affiliated to/Recognised by*:—Calcutta University.

3. *Number of students applying for admission*:—300 (160, Soap Technology and the rest in Applied Chemistry and Physics).

4. *Number actually admitted.*:—(10-admitted in Soap /Technology and (18 in Applied Chemistry and in Applied Physics—20).

5. Proposed Plan for development:—

A. *Applied Chemistry.*

(*a*) *Objective* :—

(*i*) To provide for additional staff, space and equipment for efficiently running the department and to increase the admission number consistent with the demand.

(*ii*) To provide additional electives.

(*b*) *Additional Expenditure involved* :—

Capital

	Approximate effective floor area in 1000 sq. ft,	Estimated cost in lakhs of Rupees.
(1) Additional Buildings:—		
(ii) Instructional :—		
Chemical Engineering (Laboratories Drawing office, etc.	10·50	
Applied Physical Chemistry (Laboratories)	1·90	
Electro-Chemical Technology (Laboratories)	2·25	
Inorganic Technology	1·60	
Silica Industries (Laboratories, shed for furnaces and other plants)	5·00	
Organic Technology (Laboratory)	1·60	
Oil Technology (Laboratories, sheds)	5·75	
Applied Biochemistry (Laboratories, sheds)	2·30	
Pharmaceuties (Laboratories, sheds)	3·25	
Special Plastics (,, ,,)	3·20	
Textile & Dyeing (,, ,,)	4·25	
Soap Technology (,, ,, etc.)	3·62	
General—(Seminar, Lecture Theatres, Museum Office, Stores, Workshop)	8·30	
TOTAL AREA	53·52 @ appx. 10/- per sq. ft.	5·35

(E-1)—*contd.*

(ii) Residential and Students' amenities.	Approximate effective floor Area in 1000 sq. ft,	Estimated cost in lakhs of Rupees
(1) Hostels, Play Ground, Library Common room	..	1·88
(2) Equipments (including workshop equipments)	..	3·20
(3) Fittings	..	0·58
(4) Contingencies (books, furniture, etc.)	..	0·24
Total Additional Cost	..	11·25

**Recurring :—*

Additional Staff required :—

Teaching staff	23
Laboratory staff	15
Workshop staff	14
Other staff	29
Research staff	2
	83

	Financial Implications in Lakhs of Rupees
Additional staff salary	1·84
Other expenses (including book, periodicals, etc.)	0·135
Research grant	0·205
Total	2·180

*(c) *Additional Information :—*

Proposed Scale of pay for the additional staff:—

	Rs.
Professor	700—50/2—1,000.
Reader	600—25—800.
Lecturer	200—25—500.
Demonstrator	100—15—200.
Laboratory Assistant and store clerk	40—4—80.
Research scholar	100 p.m.
Mechanic	60—120.
Electrician & Glass Blower, and other workshop Staff	40—4—80.
Librarian	80—150.
Bearers	15—1/2—22.

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*Details shown as per lists attached.

CHEMICAL ENGINEERING

Present staff

1 Lecturer.
1 Temporary lecturer on Rs. 250/- p.m.
1 Instructor in Drawing.

Area :—1,200 sq. ft.

Additional requirements

	Rs.
1 Professor	700—50/2—1,000
2 Lecturers	200—25—500.
2 Demonstrators	100—15—200.
2 Lab. Assistants	40—4—80.
4 Bearers	15—½—22
1 Mechanic	60—120.
2 Research Scholars	@ Rs. 100 p.m.

Area.

Research Laboratory	4,000 sq. ft.
General Laboratory	5,000 sq. ft.
Drawing office	1,000 sq. ft.
Store	500 sq. ft.
Fittings	Rs. 12,000.
Equipment	Rs. 1,00,000.
Recurring Working Expenses	Rs. 2,000.
Research Grant	Rs. 4,500.

Total area required	**10,500 sq. ft.**
Non-recurring grant	**Rs. 1,12,000.**
Recurring Grant	**Rs. 6,500.**
Salary	**Rs. 35,616.**

(E-1)—*contd.*

CHEMICAL TECHNOLOGY.

General.

SPECIAL ELECTRO-CMEMICAL TECHNOLOGY.

Applied Physical Chemistry.

A.

Present staff.

1 Lecturer Rs. 200—25—500

1 Bearer.

Area :—

1,325 sq. ft.

Additional requirements.

1 Lecturer	Rs. 250—25—500.
1 Lab. Asst.	Rs. 40—4—80.
1 Bearer	Rs. 15—1/2—22.
1 Electrician	Rs. 40—4—80.
1 Glass Blower	Rs. 40—4—80.

Area.

Lecturer Lab.	650	1,900 sq. ft.
2 General Lab.	1250	
Fittings	Rs. 5,000.	
Equipments	Rs. 20,000	
Research Grant	Rs. 1,000.	
Recurring Grant	Rs. 1,000.	

B.

Present staff.

Additional Requirements.

1 Reader	Rs. 600—25—800.
1 Lab. Asst.	Rs. 40—4—80.
1 Bearer	Rs. 15—1/2—22.

Area.

Research Lab.	1,000 sq. ft.
2 General Lab.	1,250 sq. ft.
Equipment	Rs. 20,000.
Recurring grant	Rs. 1,000-
Research grant	Rs. 1,000.

Total area required	A = 1,900 sq. ft. B = 2,250 sq. ft.	4,150 sq. ft.
Non-recurring grant	A = Rs. 25,000. B = Rs. 20,000.	Rs. 45,000.
Recurring grant (Research and working expenses).	A = Rs. 2,000. B = Rs. 2,000.	Rs. 4,000
Salary	A = Rs. 9,144. B = Rs. 10,824.	Rs. 19,968.

(E-1)—*contd.*

CHEMICAL TECHNOLOGY

A. GENERAL

Organic Technology

Present staff	*Additional requirements*	
1 Lecturer	1 Lecturer	Rs. 200—25—500.
1 Bearer	1 Demonstrator	Rs. 100—15—200.
	1 Lab. Asstt.	Rs. 40—4—80/-.
	1 Bearer	Rs. 15—1/2—22.
	Area	
	Research Lab.	1,600 sq. ft.
	Fittings	Rs. 3,000.
Area—678 sq. ft.	Equipment	Rs. 5,000;
	Research grant (working expenses)	Rs. 1,000.

B. SPECIAL

Oil Technology

Present staff	*Additional requirements*	
(The lecturer in Organic Technology is in charge).	1 Reader	Rs. 600—25—800.
	1 Demonstrator	Rs. 100—15—200.
	2 Lab. Asstts.	Rs. 40—4—80.
	2 Foremen	Rs. 40—4—80.
	3 Bearers	Rs. 15—1/2—22.
	Area.	
Area—420 sq. ft.	Research Lab.	1,250 sq. ft.
	3 Special Lab.	1,500 sq. ft.
	Shed for Pilot plants (3 × 1000).	3,000 sq. ft.
	Fittings	Rs. 5,000.
	Equipment	Rs. 30,000.
	Recurring grant (working expenses)	Rs. 1,000.
	Research grant	Rs. 1,000.

Total area required	A = 1,600 sq. ft. B = 5,750 sq. ft.	
Non-recurring grant	A = Rs. 8,000 B = Rs. 35,000	Rs. 43,000.
Recurring (Research & Working expenses).	A = Rs. 2,000/- B = Rs. 2,000/-	Rs. 4,000.
Salary	A = Rs. 9, 624/- B = Rs. 16,632/-	Rs. 26,25

(E-1)—*contd.*

CHEMICAL TECHNOLOGY

A. GENERAL

Inorganic Technology

Present staff	*Additional requirements*	
1 **Lecturer**	1 Lecturer	Rs. 200—25—500.
1 **Lab. Assistant**	1 Demonstrator	Rs. 100—15—200.
	1 Lab. Asstt.	Rs. 40—4—80.
	1 Bearer	Rs. 15—1/2—22.
Area —1,607 sq. ft.	Area	1,600 sq. ft.
	Fittings	Rs. 3,000.
	Equipment	Rs. 5,000.
	Recurring grant (Working expenses).	Rs. 1,000
	Research grant	Rs. 2,000.

B. SPECIAL

Slica Industries

Present staff	*Additional requirements*	
(The Lecturer in Inorganic Technology is in charge)	1 Reader	Rs. 600—25—800.
	1 Demonstrator	Rs. 100—15—200.
	2 Lab. Asstts.	Rs. 40—4—80.
	1 Moulder & Modeller	Rs. 40—4—80.
	3 Foremen	Rs. 40—4—80.
	3 Bearers	Rs. 15—1/2—22.
	Area	
Area—1124 sq. ft.	Research Lab.	1,000 sq. ft.
	2 Special Lab.	1,000 sq. ft.
	Shed for furnace & other plants (3 × 1000)	3,000 sq. ft.
	Fittings	Rs. 5,000.
	Equipment	Rs. 35,000.
	Research Grant	Rs. 1,000.
	Recurring grant (working expenses)	Rs. 1,000.

Total area required.

A = 1,600 } 6,600 sq. ft.
B = 5,000 }

Non-recurring grant.

A = Rs. 8,000 } Rs. 48,000.
B = Rs. 40,000 }

Recurring Research and working Expenses.

A = Rs. 3,000. } Rs. 5,000.
B = Rs. 2,000. }

Salary.

A = **Rs. 9,624.** } **28,176.**
B = **Rs. 18,552.** }

Non-recurring grant.
A—Rs. 8,000 } Rs. 48,000.
B—Rs. 40,000

A = Rs. 9,624. } 28,176.
B = Rs. 18,552.

(E-1)—*contd.*

CHEMICAL TECHNOLOGY

Special Subjects

Applied Biochemistry

Present staff	*Required*	
1 Professor	1 Lecturer	Rs. 200—25—500.
	1 Lab. Asstt.	Rs. 40—4—80.
	2 Bearers	Rs. 15—½—22.
	1 Foreman	Rs. 40—4—80.

Area

Present area :— 1,162 sq. ft.	Research Lab.	650 sq. ft.
	1 Laboratory	650 sq. ft.
	Shed for Pilot Plant	1000 sq. ft.
	Fittings	Rs. 5,000.
	Equipment	Rs. 20,000.
	Recurring (Working expenses)	Rs. 1,000.
	Research Grant	Rs. 1,000.

Total area required	2,300 sq. ft.
Non-recurring grant	Rs. 25,000.
Recurring grant	Rs. 2,000.
Salary	Rs. 8,448.

Pharmaceutics

Present staff	*Additional requirements*	
One Temporary Lecturer on Rs. 250 p.m.	1 Reader	Rs. 600—25—800.
	1 Lecturer	Rs. 200—25—500
	1 Lab. Asstt.	Rs. 40—4—80.
	2 Bearers	Rs. 15—½—22.
	1 Foreman	Rs. 40—4—80.

Area

Present Area: 272 sq. ft.—	Research Lab.	1,250 sq. ft.
	2 Special Lab.	1,000 sq. ft.
	Shed for Pilot Plant	1,000 sq. ft.
	Fittings	Rs. 5,000.
	Equipment	Rs. 10,000.
	Recurring (Working expenses)	Rs. 1,000.
	Research grant	Rs. 2,000.

Total area required	3,250 sq. ft.
Non-recurring grant	Rs. 15,000.
Recurring grant	Rs. 3,000.
Salary	Rs. 18,048

(E-1)—*contd.*

CHEMICAL TECHNOLOGY

A. GENERAL

Inorganic Technology

Present staff	*Additional requirements*	
1 Lecturer	1 Lecturer	Rs. 200—25—500.
1 Lab. Assistant	1 Demonstrator	Rs. 100—15—200.
	1 Lab. Asstt.	Rs. 40—4—80.
	1 Bearer	Rs. 15—1/2—22.
	Area	1,600 sq. ft.
Area —1,607 sq. ft.	Fittings.	Rs. 3,000.
	Equipment	Rs. 5,000.
	Recurring grant (Working expenses).	Rs. 1,000
	Research grant	Rs. 2,000.

B. SPECIAL

Slica Industries

Present staff	*Additional requirements*	
(The Lecturer in Inorganic Technology is in charge)	1 Reader	Rs. 600—25—800.
	1 Demonstrator	Rs. 100—15—200.
	2 Lab. Asstts.	Rs. 40—4—80.
	1 Moulder & Modeller	Rs. 40—4—80.
	3 Foremen	Rs. 40—4—80.
	3 Bearers	Rs. 15—1/2—22.

Area

Research Lab.	1,000 sq. ft.
2 Special Lab.	1,000 sq. ft.
Shed for furnace & other plants (3 × 1000)	3,000 sq. ft.
Fittings	Rs. 5,000.
Equipment	Rs. 35,000.
Research Grant	Rs. 1,000.
Recurring grant (working expenses)	Rs. 1,000.

Area—1124 sq. ft. (Present staff)

Total area required.

A = 1,600 } 6,600 sq. ft.
B = 5,000 }

Non-recurring grant.

A = Rs. 8,000 } Rs. 48,000.
B = Rs. 40,000 }

Recurring Research and working Expenses.

A = Rs. 3,000. } Rs. 5,000.
B = Rs. 2,000. }

Salary.

A = Rs. 9,624. } 28,176.
B = Rs. 18,552. }

(**E-1**)—*contd.*

CHEMICAL TECHNOLOGY

Special Subjects

Applied Biochemistry

Present staff

1 Professor

Present area :—
1,162 sq. ft.

Required

1 Lecturer	Rs. 200—25—500.
1 Lab. Asstt.	Rs. 40—4—80.
2 Bearers	Rs. 15—½—22.
1 Foreman	Rs. 40—4—80.

Area

Research Lab.	650 sq. ft.
1 Laboratory	650 sq. ft.
Shed for Pilot Plant	1000 sq. ft.
Fittings	Rs. 5,000.
Equipment	Rs. 20,000.
Recurring (Working expenses)	Rs. 1,000.
Research Grant	Rs. 1,000.

Total area required	2,300 sq. ft.
Non-recurring grant	Rs. 25,000.
Recurring grant	Rs. 2,000.
Salary	Rs. 8,448.

Pharmaceutics

Present staff

One Temporary Lecturer on Rs. 250 p.m.

Present Area:
272 sq. ft.—

Additional requirements

1 Reader	Rs. 600—25—800.
1 Lecturer	Rs. 200—25—500
1 Lab. Asstt.	Rs. 40—4—80.
2 Bearers	Rs. 15—½—22.
1 Foreman	Rs. 40—4—80.

Area

Research Lab.	1,250 sq. ft.
2 Special Lab.	1,000 sq. ft.
Shed for Pilot Plant	1,000 sq. ft.
Fittings	Rs. 5,000.
Equipment	Rs. 10,000.
Recurring (Working expenses)	Rs. 1,000.
Research grant	Rs. 2,000.

Total area required	3,250 sq. ft.
Non-recurring grant	Rs. 15,000.
Recurring grant	Rs. 3,000.
Salary	Rs. 18,048

(E-1)—*contd.*

CHEMICAL TECHNOLOGY

Special Plastics

Requirements

	Rs.
1 Reader	600—25—800.
1 Lecturer	200—15—500.
1 Lab. Asstt.	40—4—80.
1 Foreman	40—4—80.
2 Bearers	15—1/2—22.

Area

Research Lab.	1,200 sq. ft.
2 Special Lab.	1,000 sq. ft.
Shed for Pilot Plants	1,000 sq. ft.
Fittings	Rs. 5,000.
Equipments	Rs. 25,000.
Research grant	Rs. 2,000.
Recurring grant (Working expenses)	Rs. 1,000/-

Total area required	3,250 sq. ft.
Non-recurring grant	Rs. 30,000.
Recurring (Research & Working expenses) grant	Rs. 3,000.
Salary	Rs. 18,048.

Textile & Dyeing

Requirements

	Rs.
1 Reader	600—25—800.
1 Lecturer	200—25—500.
2 Foremen	40—4—80.
2 Lab. Asstts.	40—4—80.
4 Bearers	15—1/2—22.

Area

Research Laboratory	1,250 sq. ft.
3 Special Laboratory	1,500 sq. ft.
Shed for Pilot Plant	1,500 sq. ft.
Fittings	Rs. 5,000.
Equipment	Rs. 30,000.
Recurring :—	
Working expenses	Rs. 1,000.
Research Grant	Rs. 2,000.

Total area required	4,250 sq. ft.
Non-recurring grant	Rs. 35,000.
Recurring grant	Rs. 3,000.
Salary	Rs. 20,496.

SOAP DIPLOMA

Present Staff

- 1 Asstt. Lecturer
- 1 Lab. Assistant
- 1 Foreman
- 2 Bearers

Additional Requirements

1 Lecturer	200—25—500.
2 Bearers	15—½—22.

Area Required.

Research Laboratory	1,500 sq. ft.
Soap Laboratory & compounding room	1,000 sq. ft.
Store	500 sq. ft.
Shed for Factory	625 sq. ft.
Fitting	Rs. 5,000.
Equipment	Rs. 5,000.
Recurring(Working expenses)	Rs. 1,500.
Research grant	Rs. 2,000.

Total area required	**3,625 sq. ft.**
Non-recurring grant	**Rs. 10,000.**
Recurring :—	
Research and Working expenses	**Rs. 3,500.**
Salary	**Rs. 6,528.**

(E-1)—*contd*.

GENERAL

Present Area		*Additional requirements (area)*	
Seminar	366 sq. ft.	Seminar	1,200 sq. ft.
Lecture Hall	2,433 sq. ft.	3 Lecture Theatres	1,000 sq. ft.
Office	140 sq. ft.	Museum	1,600 sq. ft.
Store	312 sq. ft.	Office	500 sq. ft.
Workshop	3,859 sq. ft.	Store	2,500 sq. ft.
		Workshop	1,500 sq. ft.
			8,300 sq. ft.

Non-recurring grant :—

Workshop equipment	Rs. 15,000.
Books	Rs. 20,000.
Furniture, Almirahs for Lecture Theatres, Museum & Library	Rs. 4,000.

Recurring grant :—

For books & Periodicals	Rs. 1,500.	
1 Librarian Rs. 80—150.	Total salary. per year Rs. 2,760	
1 Store clerk Rs. 40—4—80		

Subjects	Additional area sq. ft. required	Additional non-recurring grant	Additional recurring grant	Additional salary
	Sq. ft.	Rs.	Rs.	Rs.
Chemical Engineering	10,500	1,12,000	6,500	35,616
Applied Physical Chemistry	1,900	25,000	2,000	9,144
Inorganic Technology	1,600	3,000	3,000	9,624
Organic Technology	1,600	8,000	2,000	9,624
Special Subjects :—				
Silica Industries	5,000	40,000	2,000	18,552
Oil Technology	5,750	35,000	2,000	16,632
Applied Biochemistry	2,300	25,000	2,000	8,448
Pharmaceutics	3,250	15,000	3,000	18,048
Soap Diploma	3,625	10,000	3,500	6,528
General	8,300	39,000	1,500	2,400
TOTAL	43,325	3,12,000	27,500	134,616

Students' Hostel	1,88,000		
Play ground, Library, & Common room	5,00,000	Present recurring grant including salary of staff.	Rs. 62,000
Present space	20,000sq. ft.		

(E-1)—*contd.*

B. *Applied Physics.*

(*a*) *Objective*

(*i*) To provide for additional space, staff and equipment to run the Department efficiently.

(*ii*) It is proposed that the present members of the staff should be given more facilities to devote themselves to research work.

(*iii*) To provide a hostel for 50 students.

(*b*) *Additional Expenditure involved.*

Capital *Additional Buildings	Approximate effective floor area in 1000 sq. ft.	Estimated cost in lakhs of rupees
Instructional —		
Class room	4·00	..
Laboratories	30·00	..
Drawing Office	2·00	..
Workshop	14·00	..
TOTAL	50·00	5·00
	(Approximately10/-per sq. ft.)	
Equipments:—		
Mechanical Engineering Section	..	0·70
Meter & Instruments Engineering Section	..	1·20
Line & Radio Communication Engineering Section	..	1·30
Power Engineering Section	..	0·80
Industrial Engineering and Technology Section	..	1·00
TOTAL Additional Capital Cost	..	10.00

*** Recurring :—**		
Additional Staff required :—		
Teaching (Reader 4, Lecturer 5)	9	..
Other Staff	12	..
Research Staff	5	...
TOTAL	26	..
Additional staff salary		**0·698** **lakhs of rupees (approx.)**

(*c*) *Additional Information

Scale of pay for the staff.

Readers	**Rs. 600—25—800.**
Lecturers	**Rs. 200—20—500.**
Research Asstt.	**Rs. 150—15—300.**
Mechanics	**Rs. 80—5—120.**
Librarian	**Rs. 80—5—120.**
Bearers	**Rs. 30—2—50.**

***Details as per lists attached.**

(E-1)—conta

I. Mechanical Engineering Section :—

Present staff	*Proposed staff (Additional)*	
One Professor.	Lecturers	2 (200—20—500)
One Part-time Lecturer.	Research Assistant	1 (150—15—300)
Three Mechanics.	Workshop Supdt.	1 (120—15—200)
One Oil Engine Man.	Mechanics	4 (80—5—120)
Two Bearers.	Bearers	1 (30—2—50)

II. Meter and Instrument Engineering Section :—

One Lecturer.	Reader	1 (600—25—800)
One Part-time Lecturer.	Research Assistant	1 (150—15—300)
One Demonstrator.	Bearer	1 (30—2—50)
One Fine Mechanic.		
One Instrument Repairer.		
Two Bearers.		

III. Line and Radio Communication Engineering Section :—

One Lecturer.	Reader	1 (600—25—800)
One Asstt. Lecturer.	Research Assistant	1 (150—15—300)
Two Bearers.	Bearer	1 (30—2—50)

IV. Power Engineering Section :—

Two Asstt. Lecturers.	Reader	1 (600—25—800)
One Electrician.	Research Assistant	1 (150—15—300)
One Bearer.	Bearer	1 (30—2—50)
	Lecturer	1 (200—20—500)

V. Industrial Engineering and Technology Section :—

One Laboratory Asstt.	Reader	1 (600—25—800)
Two Mechanics.	Lecturers	2 (200—20—500)
	Research Assistant	1 (150—15—300)
	Bearers	2 (30—12—50)

VI. General :—

One Office Assistant.	Librarian	1 (80—5—120)
One Draughtsman.		
One Bearer.		

Additional Accommodation	50,000 sq. ft.
Present Accommodation	17,000 sq. ft.
I. Mechanical Engineering Section :—	
(*a*) Class Rooms	1,000 sq. ft.
(*b*) Laboratories	4,000 sq. ft.
(*c*) Workshops	14,000 sq. ft.
II. Meter and Instrument Engineering Section :—	
(*a*) Class Rooms	750 sq. ft.
(*b*) Laboratories	6,000 sq. ft.
III. Line and Radio Communication Engineering Section :—	
(*a*) Class Rooms	750 sq. ft.
(*b*) Laboratories	6,000 sq. ft.
IV. Power Engineering Section :—	
(*a*) Class Rooms	750 sq. ft.
(*b*) Laboratories	4,000 sq. ft.
V. Industrial Engineering and Technology Section :—	
(*a*) Class Rooms	750 sq. ft.
(*b*) Laboratories	10,000 sq. ft.
VI. Drawing Office	2,000 sq. ft.

BENGAL ENGINEERING COLLEGE, P. O. BOTANIC GARDEN, DISTT. HOWRAH

Proposed Development Plan

1. *Started in* 1856 (as College of Civil Engineering) in 1861 (amalgamated with Presidency College Engineering Department , 1880 (removed to present site at Sibpur,) Howrah.

2. *Affiliated to/Recognised by*—Calcutta University (in 1857).

3. *Number of students applying for admission*—587 (in 1946-47).

4. *Number actually admitted.*—

Civil Engineering—	103.
Mechanical Engineering	25
Electrical Engineering	27
Metallurgical Engineering	6
TOTAL	161

5. Proposed Plan for development :—

(*a*) *Objective* :—Development Plan envisages an immediate and five year's plan.

It is proposed—

(*i*) To increase the strength of the student-body from 300 to 520 immediately and ultimately to 1,200.

(*ii*) To improve the curricula of studies.

(*iii*) To provide for adequate and better facilities in staff, space equipment and an up-to-date library for efficiently running the institution upto the post graduate and Research standard.

(*iv*) To introduce tutorial and guided study system and more branches of studies (including Architecture, town and region planning) in the degree courses and to introduce more number of electives for the existing courses.

(*v*) To introduce post graduate and research work.

(*vi*) To introduce planned and integrated workshop courses practical and significant work in industrial establishment with closer liaison with industry.

(*vii*) To provide for scholarship on wider scale to deserving candidates.

(E-2)—*contd.*

(*b*) *Additional Expenditure involved* :

Capital Expenditure	Approx. floor area in 1000 sq. ft.	Estimates cost in lakhs of Rs.
(*I*) Building		
(*i*) Instructional	264·00	*77·00
(*ii*) Residential	432·50	21·86
(*II*) Equipment		—
TOTAL		98·86

* Inclusive of cost of land extension of war supply and of sewage purification scheme a of furniture.

Additional recurring expenditure according to immediate plan :

	In lakhs off Rs. 91
Staff salary (Teaching, Adm. & other staff)	3·0
Consolidated Annual Grant	1·5
TOTAL	4·6

Additional recurring expenditure :—
Five year plan.

	In lakhs Rs.8
Staff salary (Teaching, Admn. and other staff)	6·27
Consolidated Annual Grant	4·460
TOTAL	10·739

The recurring grant for the five year plan therefore works out to Rs. 6·129 lakhs ore than for the immediate plan.

(E-3)

BIHAR COLLEGE OF ENGINEERING, P. O. MAHENDRU, PATNA

Proposed Development Plan

1. *Started in* 1876 (as a Survey School) ; 1896 (Bihar School of Eng. 1924 (Raised to the status of an Engineering College).

2. *Affiliated to/Recognised by*—Patna University and Government of Bihar (Diploma Courses).

3. *Number of students applying for admission*—267 (degree) ; 222 (Diploma)

4. *Number actually admitted*—71 (degree) ; 122 (Diploma).

5. *Proposed Plan for Development.*—Information not available.

(E-4)

COLLEGE OF ENGINEERING AND TECHNOLOGY, JADAVPUR, BENGAL

Proposed Development Plan

(1) *Started in* 1906, originally known as the Bengal Technical Institute upto the year 1923.

(2) *Affiliated to/Recognised yb*—National Council of Education, Bengal

(3) *No. of students applying for admission*—1865 in 1946.

(4) *No. of students actually admitted*—503 in 1946 including 314 for Electrical and Mechanical Engineering ; 70 for Chemical Engineering, 119 for Junior Technical, Survey and Draftsmanship and Agricultural Course.

(5) Proposed Plan for Development.

(*a*) *Objective* :—

(*i*) To provide adequate facilities in staff, space and equipment for efficiently educating a student body of 1200 in Chemical, Electrical and Mechanical Engineering at Degree standard.

(*ii*) To initiate a tutorial system of instruction.

(*iii*) To improve the curriculum by adding 23 elective courses in Chemical, Electrical and Mechanical Engineering.

(*iv*) To introduce Post-Graduate study and Research in the above courses.

(*v*) To send 12 members of the teaching staff abroad for special training in selected fundamental engineering subjects.

(*vi*) To add 6 additional courses in Civil Engineering, Geological Engineering, Aeronautics, Textile Engineering, Building Engineering and Architecture.

(*vii*) To start a Trade School absorbing the existing Junior Technical, and Survey and Draftsmanship Departments in it.

(*viii*) To provide Hostels and Staff-quarters for enabling the College to work on Residential basis.

(*ix*) To introduce a revised scale of pay for staff.

(E-4)—*contd.*

(*b*) *Additional Expenditure involved* (for existing Department) :—

	1947-48		1948-49		1949-50		1950-51	
(*i*) Additional Buildings.	Effective floor Area in 1000 sq. ft.	Cost in lakhs of rupees.	Effective floor Area in 1000 sq. ft.	Cost in lakhs of rupees.	Effective floor Area in 1000 sq. ft.	Cost in lakhs of rupees.	Effective floor Area in 1000 sq. ft.	Cost in lakhs of rupees.
Instructional	133·36	13·36						
Residential (Hostels) . . .	205·00	20·50						
Residential (Staff) . . .			53	5·30	53	5·3	53	5·3
Water-supply & sewage . .		4·50						
Additional Land . . .			500 Bighas.	20·00				
Total Cost of Land & Buildings .		38·36		25·30		5·3		5·3
(*ii*) Equipment :								
Instructional for existing curriculum		21·20						
Instructional for 23 electives .						15·0		8·0
Library		·00						
(*iii*) For Staff training abroad . .				2·00				1.0
Total Additional Capital Cost . .		62·56		27·30		20·30		14·30

Net total Additional Capital Expenditure in 4 years. Rs. 124·46 (Lakhs).

Recurring.

(Total strength of Teaching Staff aimed at 152 Additional/Teaching Staff required : 39)

	1946-47 Rs. (Lakhs)	1947-48 Rs. (Lakhs)	1948-49 Rs. (Lakhs)	1949-50 Rs. (Lakhs)
Salary of Staff (including P.F.)	4·55	5·38	6·17	6·93
Other expenses and contingencies	2·50	3·27	3·50	3·75
Total Recurring Expenses	7·05	8·65	9·67	10·68
Less Probable income	—4·06	—4·31	—4·56	—4·81
Income—				
Net Additional Expenditure involved .	2·99	4·34	5·11	5·8

Remarks :

The College appeals for

(1) Recurring Grants of Rs. 3·00 Lakhs for 1946-47,
Rs. 4·00 Lakhs for 1947-48,
Rs. 5·00 Lakhs from 1948-49 onwards.

(2) Capital Grants of Rs. 62·56 Lakhs for 1946-47,
Rs. 27·30 Lakhs for 1947-48,
Rs. 20·30 Lakhs for 1948-49,
Rs. 14·30 Lakhs for 1949-50.

The College has acquired forty years of experience imparting higher engineering education in Chemical, Electrical and Mechanical Engineering, as well as Junior Technical type of training in Electrical and Mechanical Technology. The College has so far stood entirely on its own resources which now have become entirely inadequate for maintaining a high standard and efficiency.

(E-4)—*contd.*

Additional Information :—

(1) *Revised Scale of Pay for Teaching staff suggested* —

Principal	Rs. 1500 p. m
Head of Department	Rs. 750—Rs. 1200.
Professors	Rs. 500—Rs. 1000.
Assistant Professors	Rs. 350—Rs. 500.
Lecturers	Rs. 250—Rs. 400.
Instructors	Rs. 150—Rs. 250.

(2) *23 Elective Subjects*—

(*i*) Mechanical Engineering Department—

1. Power Plant Engineering.
2. Machine Tools Engineering.
3. Automobile Engineering.
4. Refrigeration and Cold-storage.
5. Air Conditioning.
6. Engineering Administration.
7. Hydraulic Machinery.
8. Industrial and Production Engineering.

(*ii*) Electrical Engineering Department—

9. Power Engineering.
10. Communication Engineering.
11. Electrical Instruments.
12. Electric Traction.
13. Illumination Engineering.

(*iii*) Chemical Engineering Department—

14. Glass, Ceramics and Refractories.
15. Metallurgy.
16. Pharmaceutical Preparations.
17. Paints and Varnish.
18. Plastics.
19. Dyeing.
20. Oils and Fats.
21. Soap Technology.
22. Paper Technology.
23. Electro-chemical Technology.

(3) *6 Additional Departments.*

It is desired to open six Additional Departments of Civil Engineering, Geological Engineering, Aeronautics, Textile Engineering, Building Construction, and Architecture, after the existing three Departments have been ully developed, in 1950.

Estimated Capital Cost for each new Department—Rs. 3·00 Lakhs.

Annual Recurring Expenditure for each new Department Rs. 30,000.

(4) *Probable Income from all Sources.*

	1946-47 Rs. (Lakhs)	1947-48 Rs. (Lakhs)	1948-49 Rs. (Lakhs)
Tuition Fees	1·50	1.75	2.00
Income from Endowments	0·66	0.66	0·66
Grants from the Calcutta Corporation	0·30	0.30	0·30
Grant from the Bengal Government (for Chemical Engineering Department).	0·40	0.40	0·40
Contribution from the Alumni Association	0·50	0·50	0·50
Donations from others	0·50	0·50	0·50
Income from Workshops	0·20	0·20	0·20
Total from all sources	4·06	4·31	4·56

(E-5)

INDIAN SCHOOL OF MINES, DHANBAD, BIHAR, MANBHUM DISTRICT

Proposed Plan for Development

1. *Started in* 1926.
2. *Affiliated to/recognised by*—Government of India.
3. *Number of students applying for admission*—491.
4. *Number actually admitted:*—24.
5. *Proposed plan for development*—

(*a*) *Objective:*—

It is proposed —

1. To provide for admission of 60 students annually (48 mining and 12 Geology students) in place of existing number of 24.
2. To raise the standard of Geological education.

(*b*) *Additional Expenditure involved*—

	Approximate floor area in 1000 sq. ft.	Estimated cost in lakhs of Rs
(*a*) Building — (*i*) Instructional (*ii*) Residential	80·00	27.00
(*b*) Equipment	...	5.00
Total		22·00

Additional recurring expenditure :
Additional staff required.

Teaching staff—	23
Administrative staff and other staff	46

Proposed Staff Salary (for additional teaching staff)

	Rs.	Rs.
Lecturer	500 300	750 600
Demonstrator	150	250

Additional Recurring expenditure—Information not available.

(E-6)

BENGAL TEXTILE INSTITUTE, SARAMPORE, DT. HOOGHLY (BENGAL)

Proposed Development Plan

1. *Started in:*—1909.

2. *Affiliated to/Recognised by*—Govt. of Bengal.

3. *Number of students applying for admission*—149 Diploma, 126 Certificates and artisans.

4. *Number actually admitted*—40—50 (Diploma); 108 Certificates and artisans.

5. *Proposed plan for development*—

(*a*) *Objective* :—

(*i*) To provide for additional equipments for the establishment of power driven spinning and Jute Spinning Section.

(*ii*) To provide for adequate facilities for additional space and additional staff.

(*b*) *Additional Expenditure involved* :—

Capital	Approximate effective floor area in (1000 sq ft.)	Estimated Cost in Lakhs of Rupees
(*i*) Buildings—		
Instructional Class room	1·85	·18 (approx.)
(Laboratories)	7·73	·77 („)
Residential Staff quarters—2	..	..
(*ii*) Equipments—		
Power Driven Cotton Spinning Section	..	0·73
Jute Spinning Section	..	0·57
Total additional capital cost	..	2·25

Recurring.—Information not available.

(E-7)

BENGAL SILK TECHNOLOGICAL INSTITUTE, BERHAMPUR, MURSHIDABAD

Proposed Development Plan

Recurring—

1. *Started in*:—1927 (as Govt. Silk weaving and Dyeing Institute.) 1940 (Present status).

2. *Affiliated to/Recognised by*—Government of Bengal.

3. *Number of students applying for admission*—19 (excluding artisan course).

4. *Number actually admitted* —19 (excluding artisan course).

5. *Proposed Development Plan* :

(*a*) *Objective.*—It is proposed —

(*i*) to introduce courses in wool technology and artificial and synthetic fibres Technology and to change the name of the Institution to Government Institute of Silk and Wool Technology.

(*ii*) to provide for adequate facilities in space, qualified staff and up-to-date equipment for efficiently running the institution ;

(*iii*) to start a pilot mill attached to the institution to facilitate practical training ;

(*iv*) to introduce degree course in place of present diploma course and to improve the syllabii for better and elaborate training,

(*v*) to re-organise the advisory body on All-India basis.

(*vi*) to re-organise the administration and department for best benefit of the Institutions.

(*vii*) to provide for a Central Power House and staff quarters ;

(*viii*) to provide for more scholarship for under-graduate and other classes and also 3 research scholarships in textile technologe; textile chemistry and textile engineering ;

(*ix*) to provide opportunity for L.T.T. students to continue their studies in degree course as regular students by joining in 4th year.

(b) *Additional Expenditure involved*

Additional Capital Expenditure :

	Approx. floor area in 1000 sq. ft.	Estimated cost in lakhs of Rs.
(*a*) Buildings		
(*i*) Instructional	..	4·00
(*ii*) Residential	..	2·25
(*b*) Equipments	..	4·48
(c) Laboratory fittings furniture etc.	..	3·37
	Total	14·10

(E-7)—*contd.*

Additional recurring expenditure :

Staff salary	0·93 lakhs of rupees.
Other contingencies	0·41 lakhs of rupees.
Total	1·34 lakhs of rupees.

N.B.—Total number of staff required.

Administrative staff	9
Teaching staff	27
Other Staff (including Medical staff)	12

(E-8)

THE CALCUTTA TECHNICAL SCHOOL, CALCUTTA

Proposed Development Plan

1. *Started in*—1925.
2. *Affiliated to/Recognised by*—Government of Bengal.
3. *Number of students applying for admission*—163.
4. *Number actually admitted*—163.
5. *Proposed plan for development*—

A scheme for the development and expansion of the School has drawn up by the Director of Industries, Bengal. Details of the scheme have not been submitted.

(*a*) *Objective.* It is proposed to:

1. Introduce the following new course.
   (*i*) Draftsmanship, (*ii*) Welding, (*iii*) Printing,
   (*iv*) Textile Machinery, (*v*) Paper manufacturing,
   (*vi*) Automobile Engineering, (*vii*) Marine Engineering,
   (*viii*) Ceramics, (*ix*) Soap making, (*x*) Plastics.
2. Provide for adequate space, equipment and staff to run the institute efficiently.

(b) *Additional Expenditure involved*:

(1) Capital	2·00 lakhs of rupees.
(2) Recurring	0·57 lakhs of rupees.

(E-9)

CALCUTTA ENGINEERING COLLEGE, BALLYGANGE, 13, JAMIR LANE, CALCUTTA

Proposed Development Plan

1. *Started in 1930.*(Civil Engg. Sec.), 1932 (Mech. and Elec. Engg. Sec.).

2. *Affiliated to/Recognised by*—Recognised by the Director of Industries, Government of Bengal in 1932.

3. *Number of students applying for addmission* :

	Degree	Diploma	Certificate
Mechanical and Electrical Engineering	..	190	70
Civil Engineering	12	120	30

4. *Number actually admitted* :

	Degree	Diploma	Certificate
Mechanical and Electrical Engineering	..	90	38
Civil Engineering	10	40	12

5. *Proposed plan for development* :

(a) *Objective.*—Not stated—Development plan envisages a five-year plan.

(b) *Additional Expenditure involved* :

	Approx. floor in area 1000 sq. ft.	Estimated cost in lakhs
*Add. Capital Exp.		
(1) Buildings—		
(*i*) Instructional (*ii*) Residential	100·00	6·00
(2) Equipments	..	2·20
Total		8·20

Additional recurring expenditure :—

Heads of expenditure not stated clearly but the total grant required is 0.60 lakhs of rupees per year.

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*Capital grant may be distributed as follows :

2·20 lakhs of rupees in 1947
1·50 lakhs of rupees in 1948
1·50 lakhs of rupees in 1949
1·50 lakhs of rupees in 1950
1·50 lakhs of rupees in 1951

8·20 lakhs.

(E-10)

KANCHRAPARA TECHNICAL SCHOOL, P.O. KANCHRAPARA, DISTT. 24 PARGANAS, BENGAL

Proposed Development Plan

1. *Started in*—1922.

2. *Affiliated to/Recognised by*—Government of Bengal and B. & A. Rly.

3. *Number of students applying for admission*—Not known.

4. *Number actually admitted*—About 16 (depends upon the No. of vacancies).

5. *Proposed plan for development*—No plan for development.

(E-1 1)

ORISSA SCHOOL OF ENGINEERING, CUTTACK, ORISSA

Proposed Development Plan

1. *Started in*—1923.
2. *Affiliated to/Recognised by*—Government of Orissa.
3. *Number of students applying for admission*—**115.**
4. *Number actually admitted*—**40.**
5. *Proposed plan for development*—**Information not available.**

(E-12)

GOVERNMENT SCHOOL OF ARTS, CALCUTTA

Proposed Development Plan

1. *Started in*—1865.

2. *Affiliated to/Recognised by*—Government of Bengal.

3. *Number of students applying for admission*—100.

4. *Number actually admitted*—50.

5. *Proposed plan for development*—Development plan is under consideration of the Government of Bengal. Details have not been made available.

(E-13)

HARPRASAD DAS JAIN COLLEGE, ARRAH (BIHAR)

Proposed Development Plan

1. *Started in* —1942 (July) ; (B. Com. in 1944).
2. *Affiliated to / Recognised by*—Patna University.
3. *Number of students applying for admission*—557.
4. *Number actually admitted* :—75 (I. Com.) ; 202 (B. Com.).
5. *Proposed plan for development.*

(a) *Objectives*—

(*i*) A three year development plan is proposed to provide for adequate additional space, staff and equipment.

(*ii*) To provide two hostels for students.

(*iii*) To provide quarters for staff.

(*iv*) To provide for better student amenities.

(b) *Additional Expenditure Involved*—

Capital	Approximate effective floor area in (1000 sq. ft.)	Estimated cost in lakhs of Rupees
(*i*) Buildings—		
Instructional—		
(4 big Halls)	. .	1·00
Residential—		
Student's Hostel (2)	. .	0·50
Staff Quarters (9)	. .	0·90
(*ii*) Other contingencies—		
Books	. .	0·25
Commercial Museum	. .	0·05
Students' amenities	. .	0·20
Total Additional Capital Cost	. .	2·9
Recurring.—		
Additional Staff	2 lecturers.	
Additional Staff Salary	0·04 lakhs of rupees.	
Total Additional Recurring expenditure	0·04 lakhs of rupees.	

Remarks.—

The institution has one lakh of rupees in its fund and an appeal is made for generous donation for implementing the proposed plan.

(E-14)

RAJENDRA COLLEGE, CHAPRA, SARAN, BIHAR

Proposed Development Plan

1. *Started in*—1938 (Commerce Sec. *I. Com. started in* 1940. *B Com. started in* 1942).

2. *Affiliated to/Recognised by* :—Patna University.

3. *Number of students applying for admission*—75 (degree) 200 (I. Com.).

4. *Number actually admitted*—67 (degree) ; 150 (I. Com.).

5. *Proposed plan for development*—

(a) *Objective* :—No plan for development.

(E-15)

SAMBALPUR COLLEGE, SAMBALPUR, ORISSA

Proposed Development Plan

1. *Started in*—1944.

2. *Affiliated to/Recognised by*—Utkal University (Orissa Government Institution).

3. *Number of students applying for admission*—40 (Commerce).

4. *Number actually admitted*—32 (Commerce).

5. *Proposed Plan For Development* :—The College is being provisionally housed in a school building. New Buildings, Laboratories, Hostels and Staff quarters are under construction at a capital cost of Rs. 60—70 lacs.

(E-16)

GOVERNMENT COMMERCIAL INSTITUTION, CALCUTTA

Proposed Development Plan

1. *Started in*—1907 (Started provisionally), 1910 (placed on permanent basis), 1911 (present name was given).

2. *Affiliated to/Recognised by*—Government of Bengal. (Its course is equivalent to I. Com. of Calcutta University.)

3. *Number of students applying for admission.*—Information not available.

4. *Number actually admitted*—97.

5. *Proposed plan for development.*—The Institution is at present housed in rented buildings. A re-organisation committee of the Institute has been set up, which proposes that the Institute should have buildings of its own. It is further proposed to construct hostels for students and to provide the Principal with a quarter.

Details of plan and financial implications have not been specified.

(W-1)

DEPARTMENT OF CHEMICAL TECHNOLOGY, UNIVERSITY OF BOMBAY, MATUNGA, BOMBAY

Proposed Development Plan

1. *Started in*—1934.
2. *Affiliated to/Recognised by*—University of Bombay.
3. *Number of students applying for admission*—379 in 1946.
4. *Number actually admitted*— 80 in 1946.
5. *Proposed plan for development*—
   (*a*) *Objective*—
      (*i*) To increase the present admission number from 80 to 124.
      (*ii*) To double the admission No. in the Textile Chemistry Section and to start a Textile Research Department, as aslo a Section of Food Technology with proper developments of the existing Foods and Drugs Section.
      (*iii*) To build a Hostel for accommodating 100 students within the precincts of the Department, with student amenities (Sports ground, pavilion, etc.). It is stressed that Grants from outside sources are necessary to meet the additional expenditure involved for implementing the Scheme.
   *(*b*) *Additional expenditure involved*—

	Approximate Effective Floor Area (1000 Sq. ft.).	Estimated cost in Lakhs of Rupees	
Capital—			
(*i*) Additional Buildings—			
Instructional	34·0	3·40	For (*i*) in (*a*)
Residential	50·0	5·00	For (*iii*) in (*a*)
(*ii*) Additional Equipment	..	1·35	For (*i*) in (*a*)
(*iii*) Additional Buildings, Equipment, etc.	..	3·55	For (*ii*) in (*a*)
(*iv*) Additional Student Amenities	..	1·00	For (*iii*) in (*a*)
Total Additional Capital Cost	..	14·30	
Recurring—			
(*i*) Additional Staff—Number not specified		..	
(*ii*) Additional Staff Salary	...	·95	For (*i*) in (*a*)
(*iii*) Additional Staff Salary & other Contingents	...	1·18	For (*ii*) in (*a*)
Total Additional Recurring Expenditure		2·13	

DEPARTMENT OF CHEMICAL TECHNOLOGY, BOMBAY UNIVERSITY

Summary of Expenditure (Additional)

Item	Financial Implications in Lakhs of Rupees (Estimated)	
	Capital	Recurring
I. For increasing the present annual admission of students from 80 to 124 in various Sections of the Department :		
Additional Buildings	3·40	..
,, Equipment	1·35	..
,, Staff	..	·95
Total .	4·75	·95
II. For doubling the admission No. in the Textile Chemistry Section (from 15 to 30) and for the starting of a new Textile Research Department.	1·00	·43
III. For Starting a section of Food Technology and development of the existing Foods and Drugs Section of the Department.	2·55	75
Hostel accommodation being inadequate (further the present one is situated at a distance of 7 miles from the Department), plans have been prepared to build a new Hostel for accommodation of 100 students within the precincts of the Department, with provision of students' amenities (such as Sports grounds, pavilion, etc.)		
Hostel accommodation	5·00	..
Students' Amenities	1·00	..
Total Additional Expenditure .	14·30	2·13

(W-2)

LAXMINARAYAN INSTITUTE OF TECHNOLOGY, NAGPUR UNIVERSITY, NAGPUR

Proposed Development Plan

1. *Started in*—1943, 9th June.
2. *Affiliated to/Recognised by*—Nagpur University.
3. *Number of students applying for admission*—45 in 1946.
4. *Number actually admitted.*—No information available.
5. *Proposed plan for development*—
   (*a*) *Objective.*—Not specified.
   (*b*) *Additional Expenditure involved*—

	Approximate Effective Floor Area (1000 Sq. ft.)	Cost in lakhs of Rupees
Capital—		
(*i*) Additional Buildings—		
Instructional	29·2	2·92
Residential	10·0	1·00
(*ii*) Additional Equipment	..	3·50
Total Additional Capital Cost	..	7·42
Recurring—		
(*i*) Additional Staff	Information not available.	
(*ii*) Additional Staff Salary		
(*iii*) Other Contingencies		

(W-3)

COLLEGE OF ENGINEERING, POONA

Proposed Development Plan

1. *Started in.*—1854 as Poona Engg. & Mechanical School. Was affiliated to Bombay University in 1866 for Licentiate in Civil Engg. Named College of Science in 1879. From 1907 it is purely an Engineering College. The B. E. degree was instituted in 1909. B. E. Mech. & Electrical degrees instituted in 1913 & 1917 respectively.

2. *Affiliated to/Recognised by.*—University of Bombay.

3. *Number of students applying for admission.*—	Degree	804
	Diploma	419
4. *Number actually admitted*—	Degree	183
	Diploma	176

5. *Proposed Plan for Development*—

(*a*) *Objective.*—For an effective development of the college it is proposed to provide adequate additional accommodation for instructional & residential purposes, together with provision for student amenities and improvement in sanitation.

It is further proposed to provide additional equipment for

(1) Applied Mechanics Department.
(2) Chemistry & Geology Department.
(3) Civil Engineering Department.
(4) Electrical Engineering & Physics Department.
(5) Mechanical Engineering Department.
(6) Workshop.

(*b*) *Additional Financial Implications*—

	Approx. Effective Floor Area (1000 Sq. ft.)	Cost in lakhs of Rupees
Capital.—		
(*i*) Additional Buildings —		
Instructional—		
(1) Class Rooms		·8
(2) Drawing Hall for 240 Diploma students		·6
(3) Common Rooms for students & staff and a Drawing Hall for Civil Engineering		1·0
(4) Assembly Hall & Library		2·5
(5) High Tension Lab. for Mech. & Elect. Engineering . .		1·1
(6) Radio Communication Lab.		1·00
(7) Extension to Mech. Engg. Lab.		1·0

(W-3)—*contd.*

(i) Additional Buildings—contd.

***Residential*—**

	Approx. Effective Floor Area (1000 Sq. ft.)	Cost in lakhs of Rupees
Staff (Bungalows, Motor Garage & Servants Quarters)	..	·25
Students (Lounge, Reading Room & Recreation Centre)	..	Information not available.
Total for Additional Buildings	..	8·52
(ii) Additional Equipment—		
(1) Applied Mechanics Department	..	·20
(2) Chemistry & Geology Department	..	·16
(3) Civil Engineering Department	..	1·15
(4) Electrical Engineering & Physics Department	..	2·82
(5) Mechanical Engineering Department	..	3·94
(6) Workshop	..	4·61
Total for Additional Equipment	..	12·88
(iii) Additional Research Laboratory in Soil Mechanics, Concrete, etc. with a Road Test Track (probably buildings with equipment)	..	4·40
(iv) Additional Student Amenities Sheds for Physical Exercise & Cycles	..	·44
New Pavilion	..	·25
(v) Sanitation (Septic tanks, etc., for the estate)	..	·50
Total Additional Capital Expenditure	..	26·99

Recurring.—Information not available.

(W-4)

VICTORIA JUBILEE TECHNICAL INSTITUTE, MATUNGA, BOMBAY

Proposed Development Plan

1. *Started in*—1888.
2. *Affiliated to/Recognised by*—Department of Textile Manufacture is affiliated to Bombay University. The Institute is recognised by the Govt. of Bombay as the Central Technological Institute, Bombay Province.
3. *Number of students applying for admission.*—1,095 in 1946.
4. *Number actually admitted.*—280 in 1946.
5. *Proposed Plan for Development* :—

(*a*) *Objective.*—Introduction of Degree Courses in Mechanical, Electrical & Sanitary Engineering and of the study of Chemical Engineering in the Department of Tech. & Applied Chemistry. It is proposed to double the number of admissions to the existing Departments allocating 25% of the seats to Degree Courses and 75% to Diploma Courses. The aim is to develop the Institute on the lines of the Municipal College of Technology, Manchester.

(*b*) *Additional expenditure involved.*—

Capital.—

	Approximate effective floor area (1,000 sq. ft.)	Cost in Lakhs of Rupees.
(*i*) Additional Buildings.—		
Instructional	172·1	17·21
Residential	25·0	2·50
(*ii*) Additional Equipment.—		
General	..	11·16
Special H.T. Laboratory	..	2·25
(*ii*) Other Contingencies	..	2·96
Total Additional Capital Cost	..	36·08

Recurring.—

(*i*) Additional Staff :—Number not specified.		
(*ii*) Additional Staff Salary (Including P.F.)		2·83
(*iii*) Other Contingencies		1·33
	Total Rs.	4·16
Less (*iv*) Receipts from various Deptts. and other sources		1·80
*Total Additional Net Recurring Expenditure		2·36

***Details as per lists attached.**

VICTORIA JUBILEE TECHNICAL INSTITUTE DETAILS OF EXPENDITURE. (DIPLOMA AND DEGREE) NON-RECURRING.

Items.	Estimated Expenditure in Lakhs of Rupees for the Department of						Total (in lakhs)
	Mech. Engg.	Elect. Engg.	Textile Manfts.	Tech. Chemy.	Sanitary & Civil Engg.	General	
1. Building . .	4·1250	2·4375	3·0000	2·0000	1·5000		13·0625
2. Equipment . .	4·0000	2·6250	1·8360	1·2000	1·5000		11·1610
3. Special HT. Lab. . .		2·2500					2·2500
4. Fittings & Furniture	·6000	·5000	·2000	·2000	·2500	·3600	2·1100
5. Structural Alterations			·3000		·2500	·1000	·6500
6. Office Accommodation						·3000	·3000
7. General Stores .						·2000	·2000
8. Assembly Hall & Furniture . . .						3·0000	3·0000
9. Students' Common Room . . .						·2000	·2000
10. Hostel . . .						2·5000	2·5000
11. Library . .						·2500	·2500
12. Gymkhana Pavilion						·4000	·4000
Total .	8·7250	7·8125	5·3360	3·4000	3·5000	7·3100	36·0835

Recurring.

1. Salaries . .	·45000	·4278	·31500	·31500	·86160	·09425	2·46365
2. Provident Fund .	·02800	·02675	·02240	·02230	·05385	·00575	*·15905
3. Stores & Contingencies . . .	·06000	·12000	·07000	·04000	·10000	·03000 (Ancillary).	·42000
4. Depreciation & Reps.	·12000	·09000		·04000	·10000	(Subjects)*	·35000
5. Library . .			·04000	·02000	·03000		·09000
6. Office Salaries .						·16320	·16320
7. Genl. Charges .						·27250	·27250
8. Hostel Expenses						·15000	·15000
9. Library (Salaries of additional staff & Provident Fund)						·04300	·04300
10. Gardens . .						·02000	·02000
11. Gymkhana .						·03000	·03000
Total .	·6580	·66455	·44740	·43730	1·14545	·80870	4·16140

(W-4)—*concld.*

VICTORIA JUBILEE TECHNICAL INSTITUTE SUMMARY OF EXPENDITURE.

Non-Recurring.—

Items.	Total (in lakhs of Rupees).
1 Mechanical Engineering Dept.	8·72500
2 Electrical Engineering Dept.	7·81250
3 Textile Manufactures Dept.	5·33600
4 Technical Chemistry Dept.	3·40000
5 Sanitary & Civil Engg. Dept.	3·50000
6 General	·46000
7 Administrative, Hostels etc.	6·85000
Total	36·08350

Recurring.—

Items.	Expenditure.	Receipts.	NET Expenditure.
1 Mechanical Engineering	·65800	·34500	·31300
2 Electrical Engineering	·66455	·50700	·15755
3 Textile Manufactures	·44740	·22500	·22240
4 Technical Chemistry	·43730	·09600	·34130
5 Sanitary & Civil Engg.	1·14545	·52440	·62105
6 General	·13000		·13000
7 Administrative Offices Hostels, etc. etc.	·67870	·10000	·57870
Total	4·16140	1·79740	2·36400

(W-5)

KALABHAVAN TECHNICAL INSTITUTE, BARODA

Proposed Development Plan

1. *Started in*—1890.
2. *Affiliated to/Recognised by*—Government of Baroda.
3. *Number of students applying for admission*—About 400.
4. *Number of students actually admitted* —145.
5. *Proposed Plan for Development*—A scheme for a College for Electrical and Mechanical Engineering at a capital cost of about Rs. 18.6 lakhs has been sanctioned. The recurring cost will be about Rs. 3·0 lakhs.

Additional Expenditure involved—

Capital—

	Approximate floor area in 1,000 sq. ft.	Estimated cost in lakhs of Rs.
(a) Buildings	..	..
Instructional Residential	..	..
(b) Equipments	..	18·56

Recurring Expenditure—

Staff Salary	..	2·23
Other Contingencies	..	0·50
		2·73

Proposed strength of—

Teaching Staff	29
Administrative & Ministerial Staff	17
Other Staff (including w/s. staffs)	89

Proposed scale of pay.—

Principal	1,000—1,500
Professors	400—700
Lecturer	250—400
Demonstrator	150—250
W/s Supdt.	300—600

(W-6)

GOVERNMENT ENGINEERING SCHOOL, SADAR BAZAR, NAGPUR

Proposed Development Plan

1. *Started in* —Not known.
2. *Affiliated to/Recognised by*—Affiliated to Nagpur University.
3. *Number of students applying for admission* —252
4. *Number actually admitted* —About 55.
5. *Proposed plan for development*—

No Development plan available.

GOVT. TANNING INSTITUTE, BANDRA, BOMBAY 20

Proposed Development Plan

1. *Started in*—1939.
2. *Affiliated to/Recognised by*—Government of Bombay.
3. *Number of students applying for admission*—20 (excluding artisan course).
4. *Number actually admitted*—5 (excluding artisan course).
5. *Proposed Development Plan*—

No details available.

(Proposals for expansion are under consideration by Government of Bombay).

(W-8)

GOVT. LEATHER WORKING SCHOOL, KHERWADI, BANDRA, BOMBAY 20

Proposed Development Plan

1. *Started in*—1939.
2. *Affiliated to/Recognised by.*—Government of Bombay.
3. *Number of students applying for admission*—5 (excluding artisan course).
4. *Number actually admitted*—5 (excluding artisan course).
5. *Proposed Development Plan*—

Proposals for expansion and additional courses *viz.* industrial leather goods manufacture and Artistic Leather Works are under consideration by the Government of Bombay. Equipment costing about Rs. 18,000 will be needed for industrial leather goods manufacture course.

(W-9)

SIR CURSOW WADIA INSTITUTE OF ELECTRICAL TECHNOLOGY, NOWROSJEE WADIA COLLEGE, 19, BUND GARDEN ROAD, POONA 1

Proposed Development Plan

1. *Started in*—1938.
2. *Affiliated to/Recognised by*—Aided and recognised by the Bombay Government.
3. *Number of students applying for admission*—200.
4. *Number actually admitted*—40.
5. *Proposed plan for development*—

(*a*) *Objective* :

(1) To provide for adequate facilities in space and equipments to strengthen the existing laboratories.

(2) To divide the present course in two separate courses (i) Communication Engineering, (ii) Electrical and Mech. Engg.

(3) It is proposed to start short term technical courses in

- (i) Communication Engineering for Telegraph and Telephone Engineers.
- (ii) Wireless Operators Course.
- (iii) Projection Engg.
- (iv) Engine Artificers.
- (v) Sound Recording.
- (vi) Steam Laundry.
- (vii) Air Conditioning and Ventilating.
- (viii) Refrigeration.
- (ix) Photo-Technology.

(b) *Additional Expenditure involved*—

Capital :—

	Approximate effective floor area (in 1,000 sq. ft.)	Estimated cost in lakhs of Rs.
(i) Buildings— Instructional	12·00	1·60
(ii) Equipments	..	7·65
Total ..		9·25

Recurring Expenditure involved —

	In lakhs of Rs.
Staff salary	0·875
Other items	0·335
Total	1·210
Less probable income	0·930
Estimated excess expenditure	0·280 lakhs of rupees,

(W-10)

GOVERNMENT SCHOOL OF INDUSTRY, SATARA CITY, BOMBAY

Proposed Development Plan

1. *Started in*—1908 (by Dist. Local Board) (transferred to Director of Industries in 1946).

2. *Affiliated to/Recognised by.*—Director of Industries, Bombay Government.

3. *Number of students applying for admission*—55.

4. *Number actually admitted* —30 (10 in each branch).

5. *Proposed plan for development.*

(*a*) *Objective.*—To reorganise the school according to Bombay Govt's. Post-War Plan Scheme No. 64 and 71.

- (i) To introduce additional courses such as, Mechanical Engineering and its trades, Electrical Engineering and its trades.
- (ii) To provide for adequate space, staff and equipment.
- (iii) To provide for Hostel accommodation for 30 students and staff quarters for officer-in-charge, peon and cooly.
- (iv) To provide for students amenities such as play ground and pavilion with modern sporting facilities.

(*b*) *Additional expenditure involved*—No information available.

(W-11)

O'BRIEN TECHNICAL INSTITUTE, KOLHAPUR (HATTI MAHAL BUILDINGS)

Proposed Development Plan

1. *Started in*—1928.
2. *Affiliated to/Recognised by*—Kolhapur Govt.
3. *Number of students applying for admission*—20.
4. *Number actually admitted.*—15.
5. *Proposed plan for development*—

A scheme for amalgamation of O'Brien Technical Institute and Jeysingarao Ghatage Technical School to form a Central Residential Polytechnic has been approved by the Kolhapur Govt. The scheme is expected to be implemented within three years.

Estimated Cost.—Capital	Recurring
1·9 lakhs	0·40 lakhs.

Details of plan and financial implications have not been specified.

(W-12)

THE MORVI TECHNICAL INSTITUTE, MORVI, KATHIAWAR (INDIA)

Proposed Development Plan

1. *Started in* —1940 (13th July).

2. *Affiliated to Recognised by*—The Board of Technical and Industrial Training, Government of Bombay.

3. *Number of students applying for admission*—80.

4. *Number actually admitted*—50.

5. *Proposed Plan for Development*—

A capital expenditure of Rs. 3·75 lakhs has been sanctioned by the state for developing the existing Departments and opening new departments of Civil Engineering, Chemical Engineering etc.

Details of plan with financial implications have not been specified.

(W-13)

THE F. S. PAREKH TECHNICAL INSTITUTE, CHOWK BAZAR, SURAT (B. B. & C. I. RAILWAY)

Proposed Development Plan

1. *Started in*—1862 as the F.S. Parekh School of Arts and Industry. Renamed in 1909.

2. *Affiliated to/Recognised by*—Govt. of Bombay (Board of Technical and Industrial Training).

3. *Number of students applying for admission.*—105 (including Artisan course).

4. *Number actually admitted*—104 (including Artisan course.)

5. *Proposed development plan*—

(*a*) *Objective*—It is proposed

(i) to provide for better facilities in instructions ;

(ii) to raise the Certificate Courses to Diploma Standard ;

(iii) to provide for better facilities in students amenities such as better libraries, games, hostel, etc.

(*b*) *Additional Expenditure involved.*—

No details available.

Capital—10·00 lakhs of rupees.

Recurring—00·67 lakhs of rupees.

(W-14)

THE RASCHHODLAL CHHOTALAL TECHNICAL INSTITUTE AHMEDABAD

Proposed Development Plan

1. *Started in*—1910; from 1917 under Bombay Government Control.
2. *Affiliated to/Recognised by*—Government of Bombay.
3. *Number of students applying for admission*—394.
4. *Number actually admitted*—245.
5. *Proposed plan for development*—

The institute has got a plan to be completed in four years.

(*a*) *Objective*—

It is proposed

(i) to provide adequate facilities for space, equipment, and staff to run the various diploma courses (newly introduced in June 1947) efficiently.

(*b*) *Additional Expenditure involved*—

Additional Capital Expenditure—

	Approximate floor area in 1000 sq. ft.	Estimated cost in lakhs of Rs.
(*a*) Buildings—		
(i) Instructional .	30·00	3·10
(ii) Residential	8·0	0·80
(iii) For student amenities	2·00	0·20
(*b*) Equipments	..	4·00
	Total	8·10

Additional Recurring Expenditure—No information available.

(W-15)

SCHOOL OF INDUSTRY, DISTT. RATNAGIRI, BOMBAY PROVINCE

Proposed Development Plan

1. *Started in*—1863 (as a private institution); 1941 (became a Govt. Institute).

2. *Affiliated to/Recognised by*—Government of Bombay.

3. *Number of students applying for admission*—540.

4. *Number actually admitted.*—Mech. app. course—8.
Carpentry 'A'—20.
Trained Mistry—10.

5. *Proposed plan for development*—

(*a*) *Objective* —

It is proposed

(I) to introduce the following new courses :

1. Automobile.
2. Spray painting.
3. Vulcanising.
4. Battery charging and Electro-plating.
5. Motor body building.
6. Boat building .
7. Wood Turning and Lacquering.
8. Agricultural carpentry & smithy.

(II) To provide for adequate and better facilities in staff, space and equipment.

(*b*) *Additional expenditure involved*—

Additional Capital Expenditure—

	Approx. floor area in 1000 sq. ft.	Estimated cost in lakhs of Rs.
(I) Building—		
(i) Instructional	..	0·32
(ii) Residential	..	0·10
(II) Equipment	..	1·07
Total		1·49

Additional recurring expenditure :

	In lakhs of Rs.
Teaching staff	0·097
Other staff	0·013
Student amenities, library, etc.	0·015
Total	0·125

SIR J. J. SCHOOL OF ARTS, HORNBY ROAD, FORT, BOMBAY

Proposed Development Plan

1. *Started in*—1857 (with only drawing classes) ; 1880 (Govt. Institution under Education Dept).

2. *Affiliated to Recognised by* Govt. of Bombay.

3. *Number of students applying for admission*—386 (excluding artisan course).

4. *Number actually admitted*—Diploma—191.
Certificate—40.

5. *Proposed Development Plan.*— No development plan available.

(W-17)

BRIHAN MAHARASHTRA COLLEGE OF COMMERCE, POONA

Proposed Development Plan

1. *Started in*—1943.
2. *Affiliated to/Recognised by*—University of Bombay.
3. *Number of students applying for admission*—250.
4. *Number actually admitted*—170.
5. *Proposed Plan for Development* —

The College is housed in a block lent by the Ferguson College, pending construction of permanent buildings including main buildings of the College, Student Hostel, Gymkhana, Pavilion, Assembly Hall, Guest House and Staff quarters. The estimated cost for implementing the entire plan is Rs. 10 lakhs, of which Rs. 2·5 lakhs have been raised through private donations.

It is proposed to provide a Museum of Commercial Products and business office equipment for the college.

An appeal has been made for generous donations for the full implementation of the scheme.

(W-18)

HARGOVANDAS LAXMICHAND COLLEGE OF COMMERCE, AHMEDABAD

Proposed Development Plan

1. *Started in*—June, 1936.
2. *Affiliated to/Recognised by*—University of Bombay.
3. *Number of students applying for admission*—950.
4. *Number actually admitted*—Not available.
5. *Proposed plan for Development*—

It is proposed to build 100 rooms for students. Expand college buildings if necessary and construct Bungalows for Senior Members of the staff.

It is also proposed to start B. A. classes and classes for diploma in Accounting and Secretarial Practice. This would mean an extra expenditure of Rs. 10,000 per year.

(W-19)

PRATAPSINHA COLLEGE OF COMMERCE AND ECONOMICS BARODA

Proposed Development Plan

1. *Started in*—June 1942.
2. *Affiliated to/Recognised by*—University of Bombay.
3. *Number of students applying for admission*—797.
4. *Number actually admitted*—Information not available.
5. *Proposed Plan for Development* —

   (*a*) *Objective*—

   It is proposed to build a Hostel for accommodating 150 students and to provide larger playgrounds and a Gymkhana pavilion for the students.

Details of plan and financial implications have not been specified.

(W-20)

RAMNIRANJAN ANANDILAL PODAR COLLEGE OF COMMERCE AND ECONOMICS, MATUNGA, BOMBAY

Proposed Development Plan

1. *Started in* - Probably in 1942.
2. *Affiliated to/Recognised by*—University of Bombay.
3. *Number of students applying for admission*—1,150.
4. *Number actually admitted.*—Information not available.
5. *Proposed plan for Development* —

It is proposed to construct :—

(i) One Assembly Hall.
(ii) One Library.
(iii) One Professors' common room.
(iv) One Students' common room.
(v) One Student Hostel for 200 students.

It is also proposed to provide gymnasium and playground for students, as also 4 additional staff quarters.

Details have not been specified.

(W-21)

G. S. COLLEGE OF COMMERCE, NAGPUR, C. P.

Proposed Development Plan

1. *Started in*—1945.
2. *Affiliated to/Recognised by*—Nagpur University.
3. *Number of students applying for admission*—275.
4. *Number actually admitted.*—Information not available.
5. *Proposed plan for development*—

Objective—

(i) To provide a new building for the institution costing about rupees three lakhs.

(ii) To provide hostels for 400 students.

(iii) To provide quarters for members of the staff.

(iv) To provide for students amenities.

(W-22)

GOVINDRAM SEKSARIA COLLEGE OF COMMERCE (NAGPUR UNIVERSITY), WARDHA, C. P.

Proposed Development Plan

1. *Started in*—July, 1940.
2. *Affiliated to/Recognised by*—Nagpur University.
3. *Number of students applying for admission*—115.
4. *Number actually admitted*—103.
5. *Proposed plan for development* —No plan for development available.

GIPD—M—192 M of Edu—6-10-50—2,000